Atlantic Pilotage Authority

Administration de Pilotage de l'Atlantique

SUMMARY OF 2018 – 2022 CORPORATE PLAN

Canada

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1.0 EXECUTIVE SUMMARY

The Atlantic Pilotage Authority (APA) provides a valuable and necessary service to the marine community in Atlantic Canada. The highly skilled marine pilots employed by the APA make a vital contribution to the protection of the environment, to safeguarding the lives of mariners, and to preserving and promoting the economic wellbeing of ports in Atlantic Canada. A reliable and responsible marine pilotage system plays a significant role in allowing Canadian businesses to remain competitive in the global marketplace.

The Authority's corporate objectives are the following:

To deliver safe and effective marine pilotage services in Atlantic Canada.

The most significant risks associated with this objective are not having sufficient pilot resources and the loss of pilot launch services. Low customer satisfaction would also present a risk for the reputation and operation of the Authority.

To maintain financial self-sufficiency by exercising effective cost management and establishing tariffs that are fair and reasonable.

The Authority faces external economic risk where traffic or revenues are not within the control of the APA. The Authority has more control over costs, but still faces the risk that operating costs may exceed the amount budgeted when tariffs are set.

STATEMENT OF OPERATIONS							
	ACTUAL	OUTLOOK	BUDGET	PLAN			
	2016	2017	2018	2019	2020	2021	2022
TOTAL INCOME	23,816	25,981	26,432	27,119	27,814	28,369	28,937
TOTAL EXPENSES	22,897	24,441	25,600	26,076	26,736	27,239	27,754
NET INCOME BEFORE SURCHARGE	919	1,540	832	1,043	1,078	1,130	1,183
SURCHARGE REVENUE	278	343	167	-	-	-	-
PROFIT FOR THE YEAR	1,197	1,883	999	1,043	1,078	1,130	1,183
RATE OF RETURN	5.0%	7.2%	3.8%	3.8%	3.9%	4.0%	4.1%

To provide a reliable and self-sustaining service by safeguarding the Authority's people and assets while planning for succession and asset replacement.

The highest risk of personal injury at the Authority occurs during the transfer of a pilot between the pilot boat and vessels being piloted.

The ability to recruit suitable mariners for pilot positions and operate suitable pilot boats are also risks.

To assume a leadership role in marine navigation by providing an expertise in navigational safety and marine operations.

It is very beneficial for the APA to be involved in marine projects as they develop. It is also greatly appreciated by industry. There is a risk that the APA would not have the expertise required to provide support or that industry does not think of the APA as a resource for these activities.

To contribute to the Federal government's environmental, social, and economic policies as they apply to the marine industry in Atlantic Canada.

The risk is that the Authority does not support the environmental, social, and economic policies, or does not follow Government directives and guidance.

Capital Budget

The Authority completed the purchase of two additional vessels as it continues its fleet replacement program. The total cost budgeted was $3.0 million, but due to the exchange rate fluctuation and duty paid, the total cost was $3.4 million.

Pilot boat refits and equipment are expected to increase as there are two vessels due for Lloyd's Register inspections in 2018. Navigational packages are budgeted to be upgraded and spare equipment purchased for the two newer vessels. Two engines will require rebuilding for the Newfoundland vessels and several vessels require searchlight upgrades. The Authority has a breakwater as well as wharf facilities in a number of locations that require capital improvements on an annual basis. The 10-year lease for Head Office expired at the end of May 2017 and the office moved to another office building in downtown Halifax. Computers and office equipment includes PPU's to finish supplying the pilots with their Personal Pilotage Units. There are no large software projects planned for 2018, but there will be upgrades to current programs.

	ACTUAL	OUTLOOK	BUDGET	PLAN			
	2016	2017	2018	2019	2020	2021	2022
PILOT BOATS							
PURCHASE OF BOAT	-	3,400	-	-	-	-	-
PILOT BOAT REFIT AND EQUIPMENT	490	709	878	700	750	700	700
WHARVES AND STRUCTURES	27	115	65	50	450	20	20
LEASEHOLD IMPROVEMENTS	-	530	-	-	-	-	-
COMPUTER AND OFFICE EQUIPMENT	130	202	201	80	80	80	80
COMPUTER SOFTWARE	39	53	18	30	25	25	25
TOTAL	$ 686	$ 5,009	$ 1,162	$ 860	$ 1,305	$ 825	$ 825

Borrowing Plan

There is no additional borrowing being requested for 2018, but the Authority is planning on maintaining its line of credit at $2.5 million (See Section 8 for further details).

2.0 MANDATE, CORPORATE PROFILE

2.1. BACKGROUND

The Atlantic Pilotage Authority was established February 1, 1972, pursuant to the *Pilotage Act*.

The Authority is a Crown Corporation as defined by the *Financial Administration Act* (FAA) and is listed in Schedule III, Part I to that Act. The Authority is not an agent of the Crown.

The Authority has not received parliamentary appropriations since 1995 and, under provisions of the *Pilotage Act*, is not eligible for future appropriations.

The Board of the Authority consists of a part-time Chairperson and not more than six other members, all appointed by the Governor in Council.

The Chief Executive Officer (CEO) has the direction and control of the day-to-day business of the Authority. The Authority is administered and controlled at its headquarters, which is located in Halifax, NS.

2.2. POWERS

To carry out its responsibilities, the Authority has established regulations, approved by the Governor in Council pursuant to the *Pilotage Act*, in order to:

- Establish compulsory pilotage areas;
- Prescribe ships or classes of ships subject to compulsory pilotage;
- Prescribe classes of pilot licences and pilotage certificates that may be issued;
- Prescribe pilotage charges payable to the Authority for pilotage services.

In addition, the Authority is empowered under the *Pilotage Act* to:

- Employ such officers and employees, including licensed pilots and apprentice pilots, as are required for operations;
- Establish internal regulations for managing its operation;
- Purchase, lease or otherwise acquire land, building, pilot boats and other equipment and assets deemed necessary, and to sell any assets thus acquired;
- Borrow, if necessary, in order to defray the Authority's expenses.

2.3. Mission, Vision, And Values

The strategic vision for the Authority was updated by the Board in 2016. It is reviewed annually for relevance and will be completely updated again in 2021.

Mission Statement: To deliver safe, effective and self-sustaining marine pilotage services in Atlantic Canada.

Vision Statement: The Vision of the Atlantic Pilotage Authority is to be a respected leader in marine pilotage safeguarding people, property and the environment.

To achieve the vision, the Authority must demonstrate:

- An industry-leading safety record
- Operational efficiency where customers receive tangible value for the tariff they pay
- Marine expertise where APA pilots are viewed as leaders in the field of marine navigation and safety
- A self-sustaining business model that allows the Authority to provide services and be financially self-sufficient

Core Values:

- **Safety**
  The Authority will emphasize safety over any competing goals or pressures to ensure the protection of people and safeguarding of property.
- **Environment**
  The Authority will strive to protect and conserve the natural environment and local communities.
- **Service**
  The Authority is dedicated to being a trusted partner in providing effective and efficient marine pilotage services and expertise in marine navigation.
- **Relationships**
  The Authority will build and maintain long-term respectful relationships with employees, customers, contractors, and suppliers.
- **Accountability**
  The Authority will be accountable to the Federal Government, the public, and to its customers for actions taken and the results of its operations.

2.4. DESCRIPTION OF OPERATIONS

Since 1972, the Authority has operated, in the interest of safety, a marine pilotage service for all Canadian waters surrounding the four Atlantic Provinces, including the waters of the Bay of Chaleur in the Province of Quebec. This is the only program of business for the Authority.

The Authority provides licensed pilots to ships that enter Atlantic Canadian Ports in order to ensure that these ships travel within the pilotage area as safely as possible. The Authority also examines qualified mariners, and issues pilotage certificates to successful candidates to enable them to navigate their ships within designated compulsory areas without a licensed pilot on board. The Authority organizes its operations according to geographic location, and has designated seventeen areas as requiring compulsory pilotage, with one further area in the regulatory process to become compulsory. The Authority also endeavors to provide pilotage service to other areas, referred to as non-compulsory areas, upon request. Most of the pilots licensed by the Authority are employees; however, pilots may also be entrepreneurs, or a member of a body corporate contracting with the Authority for pilotage services. Pilot boat services may be owned and operated by the Authority or by a private operator who has a contract with the Authority. A complete breakdown of all revenue and costs related to the pilotage service is calculated and totaled for each port and area, and summarized for the entire operation.

Demand for the services of the Authority is, for the most part, determined by the shipping industry, over which the Authority has little or no control. The Authority evaluates its performance according to the achievement of a safe, efficient, and effective marine pilotage service while maintaining financial self-sufficiency.

In addition, success is determined by how well the Authority adapts to changes in world trade, to the establishment of new business ventures, and to patterns that develop within the shipping industry. Shipping operates on market demand. The Authority does not attract ships to the Atlantic region; it merely responds to a demand that is influenced by a number of factors. These factors include changes of shipping patterns, fluctuations in demand within the world economy, volatility in oil prices, and the effect of regulatory changes by other nations.

The Authority operates within the marine transportation sector. No competition exists to provide this service in compulsory pilotage areas.

The Authority implements tariffs that are fair and reasonable after extensive consultation with the users of the service. These tariffs are designed to allow the entity to operate on a self-sustaining financial basis. In order to amend tariff regulations, the APA must pre-publish the proposed tariff amendments in the Canada Gazette. Upon publication, any interested person who has reason to believe that the proposed tariff charges are prejudicial to the public interest may file a notice of objection with the Canadian Transportation Agency (CTA). If an objection is received, the CTA may make an attempt to mediate between the parties. If the mediation is not successful and the objection stands, the CTA is required to investigate the proposed tariff charges and render a recommendation to the Authority and the Minister of Transport. The Authority is obliged to abide by the recommendation.

2.5. FINANCIAL POSITION

The Authority's financial statements are prepared in accordance with International Financial Reporting Standards (IFRS). The financial position as at December 31 under IFRS was as follows (in thousands of Canadian dollars):

	2016	2015
Current assets	5,056	3,606
Non-current assets	9,639	10,374
	14,695	13,980
Current liabilities	2,227	2,224
Non-current liabilities	4,719	5,201
	6,946	7,425
Equity	7,749	6,555
	14,695	13,980

The working capital as at December 31, 2016 and 2015 was $2,829,000 and $1,382,000 respectively.

Operating Statement for fiscal year ending December 31

	2016	2015
Revenue	24,093	22,673
Expenses	22,896	23,224
Profit (loss) for the year	1,197	(551)

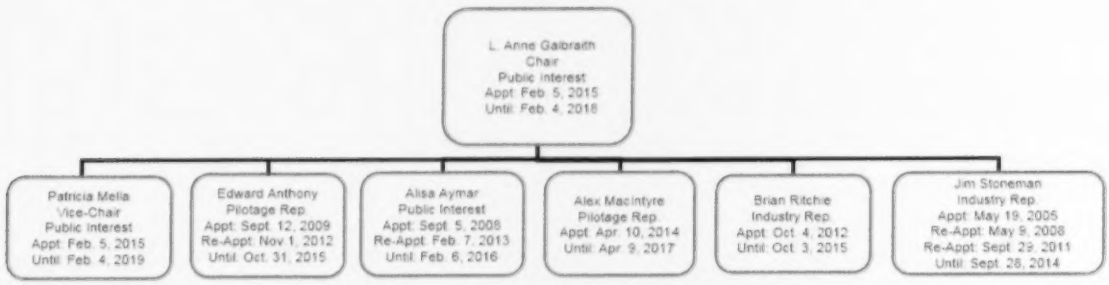
The Authority has had two consecutive years in 2014-2015 with significant losses totaling $1,169. The loss in 2014 was due primarily to costs incurred to expand its pilot numbers in an attempt to improve service levels and prepare for retirements. In 2015, the Authority's revenues were below budget due to maintenance slowdowns at a number of facilities that affected tanker assignments and an overall decrease in average vessel size. In 2016 a surcharge was added and was meant to recover a large portion of these losses over a three-year period and includes an agreement with industry to review it annually to determine its continued necessity and its effectiveness. Traffic rebounded in 2016 and the year's profit of $1,197 offset the total losses incurred over that two-year period.

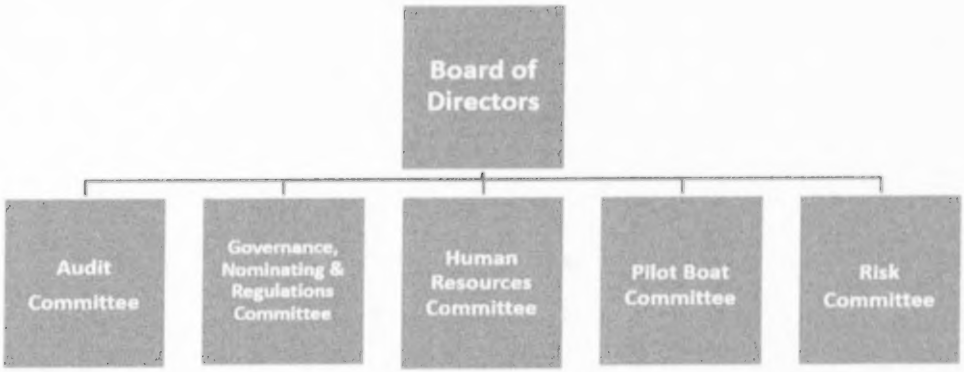
2.6. GOVERNANCE

Similar to other Crown corporations, the Atlantic Pilotage Authority operates at arm's length from its sole shareholder, the Government of Canada. While the shareholder provides policy direction for the corporation's ongoing operations, as stated in the *Financial Administration Act* (FAA), the Authority (Board) ensures that the corporation fulfills its mandate by setting the corporation's strategic direction and organizational goals, and by monitoring their implementation. The Authority reports to Parliament through the Minister of Transport.

The Chair and Members of the Board are appointed by Governor-in-Council for terms of two to four years. The Board is composed of members with marine pilotage experience, members with shipping industry experience, and members representing the interests of the public at large. An effort is also made to have the Board reflect the widespread geographical area within the APA jurisdiction. This cross section of industry and business knowledge, experience, business acumen, and regional perspective provides an excellent background for the Board's deliberations. The Board is a representative Board where opinions from each side minimizes risks associated with conflicts of interest. Members are expected to recuse themselves from any discussion that may represent a conflict. All associations of the Members are documented and presented to the Chair so conflicts can be actively managed. The Board of Directors meets at least quarterly with other meetings scheduled as needed. The Board has created a number of committees with specific responsibilities, and further information on these committees is provided below.

The following organizational chart indicates the composition of the Board as at September 1, 2017, followed by a chart indicating the Board committees that are in place. The Members remain on the Board until a re-appointment or replacement is made by Order-in-Council. The Chair does not serve beyond the end of their term.





Audit Committee - The Audit Committee is a core committee of the Authority's Board of Directors. The FAA specifically requires the Authority to establish an audit committee. It is responsible for the following:

- provide financial oversight for the authority;
- improve the quality of the financial reporting;
- enable the directors to contribute their independent judgement;
- create a climate of discipline and control that will reduce the opportunity for fraud;
- increase stakeholder confidence in the credibility and objectivity of corporate performance.

Governance, Nominating and Regulations Committee – is responsible for the following:

- Define roles and responsibilities for the Board and Management.
- Develop a composition strategy for the Board that identifies the skills, experience, qualifications, and diversity characteristics needed on the Board.
- Develop and maintain a profile of requirements for the positions of Director, Chair and CEO.
- Critically review management's recommendations proposing amendments to any Corporate By-Laws, Policies and Procedures and Committee Terms of References.
- Assess and make recommendations on the structure of committees for the Board, with the involvement of the Chair.
- Set standards and procedures to address conflict of interest issues and situations, investigate any specific conflict of interest concerns, and report to the Board.
- Develop and follow a rigorous process of selection of candidates to satisfy the Board's competency profile as a whole. The committee will report to the Board of Directors to obtain approval of recommended candidates.
- Critically review management recommendations proposing amendments to any regulations associated with *Pilotage Act*, General Pilotage Regulations, and Atlantic Pilotage Authority Regulations.
- Actively solicit information about significant risks and exposures to such amendments;
- Review the integrity and effectiveness of such amendments;
- Review any significant findings and recommendations made by the external and/or internal auditors regarding regulations and follow up on management's subsequent actions.

Human Resources Committee – is responsible for the following:

- Evaluation of the CEO and recommendation of compensation and benefits.
- Review of management compensation ranges and benefits.
- Review management succession plans.
- Review significant changes to the organizational structure of the Authority as recommended by the CEO.
- Review the mandate for the bargaining team for collective agreement negotiations.
- Review the hiring schedule for pilot positions.
- Perform other functions as may be assigned by the Board.

Pilot Boat Committee - is responsible for the following:

- Critically review management reports associated with the operation of pilot boats (either owned by the Authority or contracted), and, whenever deemed necessary, actively solicit any further information through the appropriate parties;
- Critically review new technological advances related to the pilot boat, administration, pilots, or other aspects of the operation, and when necessary solicit further information through the appropriate parties;
- Actively solicit information about significant risks and exposure related to pilot boats, and review the adequacy of controls and procedures to manage those risks; and
- Review any significant findings and recommendations regarding pilot boat operations made by the external auditor and follow up on management's subsequent actions.
- Assist Management in developing and following a long-term strategy for the Authority's fleet renewal program

Risk Committee - is responsible for the following:

- Actively solicit information about significant risks and exposures and review the adequacy of internal controls to manage those risks;
- Review Management's appraisals of financial and operational risk and oversee Management's progress towards mitigating the risks as defined in the Enterprise Wide Risk Management Framework (EWRMF).
- Ensure oversight of the process, financial and management control and practices relating to a specific Pilotage Risk Management Methodology (PRMM); critically review facilitator's, stakeholders' and management reports associated with a PRMM and then make a recommendation to the Board to ACCEPT, REJECT or AMEND the recommendation(s).

2.7. ORGANIZATIONAL STRUCTURE

Officers and Senior Managers

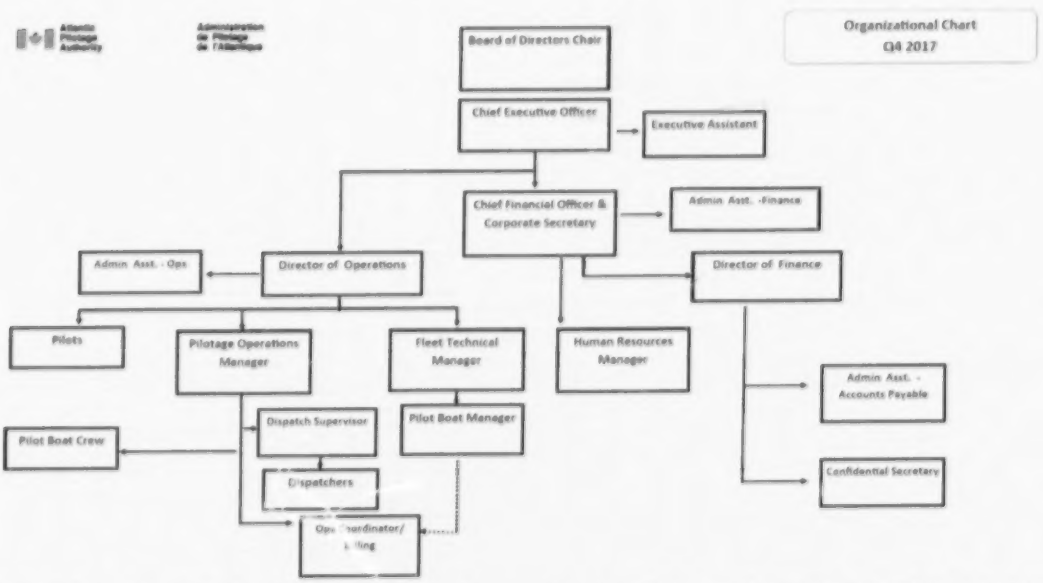
The Chief Executive Officer (CEO) is appointed by the Board of Directors and oversees the operation and management of the Authority in accordance with the Board's strategic direction. The Chief Financial Officer (CFO), reporting to the CEO, is responsible for finance and administration while also acting as the Corporate Secretary. The Director of Operations, also reporting to the CEO, is responsible for pilotage and dispatch operations as well as pilot boat maintenance. The Director of Finance, reporting to the CFO, prepares budgets and provides oversight and financial analysis.

Managers and Supervisors

The Human Resources Manager, reporting to the CFO, oversees the human resources programs and benefits. The Pilotage Operations Manager (POM), reporting to the DOO, is responsible for the daily management of pilotage and dispatch operations. A newly created position for the Authority, the Fleet Technical Manager (reporting to the DOO) is responsible for the strategic management and daily operational performance of the fleet of vessels and marine assets of the Authority. This position replaces the Pilot Boat Engineer position. The Pilot Boat Manager, reporting to the Fleet Technical Manager, is responsible for the coordination and administrative maintenance of Authority owned pilot vessels. The Dispatch Supervisor, reporting to the POM, is responsible for direct supervision of the dispatch centre.

Other administrative staff are employed to administer the day to day operations of the Authority. The following chart indicates the organizational structure of the administration of the Authority for the end of 2017.

2017 Organizational Chart



Continuity planning will lead to structural changes in the Organization. The CFO has put in a notice to retire at the end of 2018 and the Director of Finance has been named the successor. The Director of Finance position was created in preparation for this succession and will return to being a more junior accounting position. There were areas raised in the Special Examination regarding employee reviews, documentation, and policy that suggested director level ownership and accountability would benefit the Authority. The Human Resources Manager position will evolve into a Director of Human Resources position. This position will report to the CFO and will be responsible for management of all human resources programs, policy and compliance, and will act as the Corporate Secretary when the current CFO retires. The Admin Assistant - Finance position will also be retiring later in 2018 and the position will be eliminated. Early in 2019 the compliment of management personnel will return to 2017 levels.

3.0 STRATEGIC ISSUES, ENVIRONMENT

3.1 KEY STRATEGIC ISSUES

The primary business activity of the Authority is to provide a safe and efficient pilotage service. The Authority charges the user, or customer, for the service.

(i) An ideal performance would be one in which the service provided was completely safe; i.e. without shipping incidents, and without injury or damage to individuals, vessels, port facilities, or the environment. Historically, the Authority has maintained a low level of shipping incidents; however, it is recognized the Authority has the inherent risks associated with the business, and the potential for an accident is always present.

(ii) The financial position of each port is closely monitored to avoid cross-subsidization wherever possible. Tariff increases are sought for areas that are indicating a decline in their return below acceptable levels or are no longer self-sufficient. All aspects of an area's operation are monitored to determine whether cost cutting measures are more appropriate to achieve a positive result before tariff increases are considered. For 2018, the Authority will target a rate of return on revenue of 3.5%. This rate of return is the same as that targeted in 2017. The projected results for the Authority in 2017 is for this targeted return to be surpassed The shipping industry in Atlantic Canada has been facing significant challenges competing in the worldwide shipping economy. This has been exacerbated by the challenges presented in the energy sector, and other commodity markets.

The price gap between overseas oil priced at the Brent Crude rate and the domestic North American oil at the West Texas Intermediate (WTI price) has a large impact on operations and impact the Authority. The movement to North American oil in recent years has resulted in smaller ships on average, as the Very Large Crude Carriers (VLCC) are not being utilized for crude delivery to the same extent. In some instances, oil may also be brought to refineries by rail, reducing the sea-borne demand. This had a large effect on 2015 financial results, but the difference in price between Brent Crude and WTI has been reduced. Oil sourced from overseas increased in 2016 which has led to a return to larger vessels with larger revenues for the Authority. This trend has continued in 2017.

Bulk and dry cargo vessels have been affected by falling commodity prices. In Saint John, it was announced early in 2016 that PotashCorp would be suspending its potash operation in the area indefinitely. The Authority had been anticipating increased production from the new potash mine. In 2017, potash exports grew through the Port of Saint John as PotashCorp transferred product from its Saskatchewan mine to Saint John for export. A coal transshipment operation in the Strait of Canso that had decreased operations dramatically has been more active in 2017 as global demand for the commodity increased and the market prices of coal rebounded. This operation is very price sensitive and is very difficult to predict moving forward.

The container business continues to have challenges because of the economic crisis in Europe, resulting in rationalization of trade amongst the various container lines. The

consolidation and widening of the Panama Canal has brought a move to much larger container ships on the East Coast. A number of ports in Atlantic Canada have the strategic advantages of deep water and lack of encumbrances to handle these larger vessels. The Port of Halifax is already seeing the benefits as container traffic has increased and larger vessels are scheduled. The container business is highly competitive and cost sensitive. Significant increases in costs reduce what are already slim margins for operators. Because of these issues, the Authority has been very careful not to impose more hardship on its customers by targeting them with higher tariff increases than what are absolutely necessary.

The following Table reflects the annual average percentage increase in revenue anticipated to be derived from increased tariffs during the following periods. The present estimates for 2018 – 2019 will be affected by any changes in traffic patterns.

Annual Tariff Increases and Financial Targets

Year	2017	2018	2019
Average Percentage Increase in revenue.	4.12%	3.33%	2.31%
Annual Profit Target	3.50%	3.76%	3.85%
Severance Liability Fund Contributions (Minimum)	-	$200	$200
Pilot Boat Replacement Fund Contributions (Minimum)	-	$200	$200
Current Ratio (Minimum)	-	2:1	2:1

Due to the losses in 2014 and 2015, a surcharge of 1.5% was implemented for 36 months from March 11th, 2016 to March 10th, 2019 and is subject to an annual review. This surcharge was estimated to provide $975,000 in additional revenue over the three years. Based on the Authority's 2016 profit and 2017's projected performance, the Authority re-evaluated the need for this surcharge and will be proposing an amendment to end it nine months early on June 30th, 2018. With this early termination, the surcharge is projected to raise a total of $817,000 during its existence. Details of the proposed tariffs will be discussed further under section 4.4.

(iii) The Authority recognizes the following factors that are important in maintaining financial self-sufficiency:

a) *Maintaining sufficient reserves for an unfunded liability pertaining mainly to severance payments*

This liability was $1,469,000 at December 31, 2016. This liability will grow through 2021, and then begin to decline. The benefit has been removed from non-union employees' benefits, has been negotiated out of two collective agreements, and has been eliminated for new employees in the third collective agreement. The Authority set an annual target for savings for this purpose and is beginning in 2017 by putting $200 thousand aside for this purpose.

b) *Maintaining the financial capacity to borrow or fund the cost of acquiring new pilot boats.*

During 2007, the Authority completed the first two boats in the pilot boat replacement program at a total cost of $6.725 million. These boats were designed for the harsh conditions of Placentia Bay, and are deployed in that area. Construction commenced in 2011 on a third and fourth vessel. The third vessel was delivered to Halifax midway through 2012. The fourth vessel was delivered for Saint John in January of 2013. The total cost for these two vessels was $5.8 million. The new boats have been designed for the conditions prevalent in Halifax and Saint John, and replaced older boats that have an average age of more than 30 years (see Appendix B for more pilot boat information). The Authority procured two used vessels that were added to the fleet in 2017 at a cost of $3.4 million as replacements for older boats. Beginning in 2017, the Authority intends to target annual savings to build a fund for boat replacement and is beginning by adding $1 million to savings, well above the targeted minimum goal of $200 thousand.

c) *Maintaining a reserve fund to allow the Authority to remain financially sound during economic downturns.*

The Authority has set a target to maintain a current ratio of 2:1. Current assets will be maintained at a level that is twice the current liabilities. This will represent the reserve fund that will allow the Authority to remain financially sound during economic downturns. For 2017, after the $1.2 million has been put aside for the goals a) and b) above, the Authority is projecting having a current ratio of 2.1:1 and meeting this target.

By focusing on the above factors, it is felt that the Authority will continue to be self-sufficient while addressing the issue of cross-subsidization among ports. The Authority is committed to providing fair and reasonable tariffs, with minimal rate increases when necessary and rate reductions in ports in which profit is projected to be in excess of requirements for the foreseeable future.

iv) Assessment of Corporate Resources

The Authority strives to maintain a highly skilled and well trained work force of pilots, pilot boat crews, dispatchers and administrative staff. The licensed pilots are professionally qualified and the pilot boat crews are well trained to conduct a safe marine pilotage service. However, the Authority constantly monitors the requirements for each port and adjusts personnel resources as necessary.

Pilotage and the marine industry are undergoing rapid technological change regarding electronic equipment, propulsion systems and vessel design. The Authority continuously evaluates and modifies training programs to deal with the rapidly evolving technology. Technology is also providing cost effective tools that may assist a pilot in performing their

duties more effectively and safely. The Authority is committed to providing the required technology to pilots and employees to increase their personal safety and the effectiveness of the operation.

The Authority has a number of vessels that are aging yet playing significant roles in a number of ports. These vessels will become less reliable over time and become more difficult to repair as sourcing equipment will become more challenging. The Authority conducts annual inspections of all of its pilot boats to assure they are safe platforms. Replacing vessels as they age is a main priority of the Authority with a long-term boat replacement strategy being developed and a boat replacement fund being established. The continuous training of the Authorities people is also a significant priority, as is investments in Portable Pilotage Units (PPU's).

3.2 Corporate Strengths and Weaknesses

The following are the Authority's main strengths and weaknesses:

Strengths

- A qualified, experienced team;
- Provision of highly efficient and professional pilotage services;
- Recognition of the compulsory pilotage principle by most industry stakeholders;
- Good relations with bargaining units and unions;
- Consensus throughout the organization on the need to continually improve client service and strive for excellence;
- Competitive pilotage tariffs;
- Organizational structure well suited to its mandate;
- Equipment renewal and capital investment in recent years are positive factors in boosting productivity. These investments include the construction of new pilot boats for Placentia Bay, and Saint John, as well as the purchase of two modern vessels for Halifax.
- Taking advantage of new computer technology, including the following initiatives
  - implementation of an Automatic Identification System (AIS) for the dispatch centre in 2008;
  - a new website used by the public, customers, and employees in 2009;
  - dedicated Board website in 2010 to allow easier dissemination of complex reports to Board Members;
  - new financial software in 2011 allowing greater flexibility and capacity;

- design and implementation of an electronic source form submission through hand-held devices in 2012 - 2013.
- new tablets for pilots to use as aids to pilotage on board vessels in 2014-2018.
- new leave tracking and human resources software in 2018.

⇨ The Authority's custom designed Dispatch and Billing System provides real time information to dispatchers, pilots, customers, and management. The Authority upgraded to a new version of this software in 2008, which allowed further productivity gains, with continuous changes and improvements made each year;

⇨ Pilots are highly skilled, which is reflected in a 99.94% incident-free assignment rate during the past five complete years (2012-2016 inclusive). The incident-free assignment rate for 2016 was 99.92% with 6 minor incidents in the 7,959 pilotage assignments. There were no injuries or environmental contamination associated with any of these incidents. The Authority has implemented a comprehensive training program for all pilots, and firmly supports continuing education by providing refresher training to experienced pilots, and by providing training on new technologies as they are developed;

⇨ The Authority has developed a disaster recovery plan that allows continuity of service in an emergency. The plan is updated and tested annually. It was successfully implemented in the autumn of 2003 when the Authority's head office had to be evacuated during a state of emergency after Hurricane Juan struck Halifax. The plan was also instrumental in allowing service to continue in February 2004 when a major snowstorm dumped unprecedented amounts of snow on Halifax, causing the paralysis of the city for several days.

⇨ The Authority has generated an Incident Management Plan to be deployed if there is a marine incident in the Authority's operational area.

⇨ The Authority has three large composite districts encompassing three compulsory areas in each. By using the same cross-licenced pilots for all ports, efficiencies are gained and pilot salary costs are shared, allowing each of the ports to be viable. If each were individual ports, the number of pilots required and tariff costs would be higher in the individual ports.

Weaknesses

⇨ Revenues are susceptible to changes in local and world economic conditions. The Authority has adjusted the tariff structures to reduce the exposure to these changes.

⇨ Expenses susceptible to fluctuations in commodity prices, such as fuel. The Authority has mitigated this weakness through a revision of tariff regulations to include a fuel charge that reflects market prices;

⇨ Some major ports are largely supported by one industry, which makes the Authority susceptible to unexpected local situations within the industry. For these ports, the Authority targets a larger return on revenue to compensate for the risk of traffic interruption;

- Potential for objections to tariff regulation proposals that would substantially delay generating required revenues. The Authority mitigates this weakness through regular consultation with stakeholders. These consultation meetings provide an open forum for discussion which reduces the chances of objection.

- Slow administrative process for implementing regulations, including tariff regulations. Management of the Authority works as closely as possible with the regulatory personnel in Transport Canada and Central Agencies to make the process as efficient as possible. Multi-year tariff proposals will mitigate the effect of late tariff regulation;

- With advanced technology on vessels, finding new pilot recruits with adequate shiphandling skills has become more difficult. The Authority mitigates this weakness by extending the time required to train a pilot, but it adds to the effect of the weakness below.

- Specialized training required of a pilot means that the Authority may not be able to react quickly in the event of dramatic increases or decreases in traffic or an unexpected loss of manpower due to illness or injury. The Authority attempts to address this in some ports through composite districts with cross licensed pilots

- Concurrent implementation of tariffs and pilotage contracts is difficult to achieve and maintain due to the process required to implement tariffs. An attempt is made to have the terms of contracts and agreements coincide with the time frame of effective tariffs expected to cover them;

- Difficulty in forecasting marine traffic levels. The Authority consults regularly with industry while monitoring larger economic factors in order to make forecasting as accurate as possible. The actual assignments realized within the past five complete years has been within 97.4% of forecast overall.

- The PRMM process is costly with no guarantee or expectation that the costs can be recovered from the port or area in question. In an attempt to control the total cost of monitoring ports while maintaining due diligence, the Authority has been conducting a preliminary review for each province to determine the ports for which a full PRMM is necessary. This review limits the APA's exposure to full PRMM project costs by providing this preliminary screening.

3.3 Analysis of External Commercial Environment

Revenue and traffic Patterns

The Authority provides pilotage service in the seventeen compulsory ports indicated in the below map. Pilotage service is provided to non-compulsory ports upon demand. The Authority has pilots licensed for seventeen non-compulsory ports and did assignments in the majority of these areas in 2016.

Atlantic Pilotage Authority Compulsory Pilotage Areas

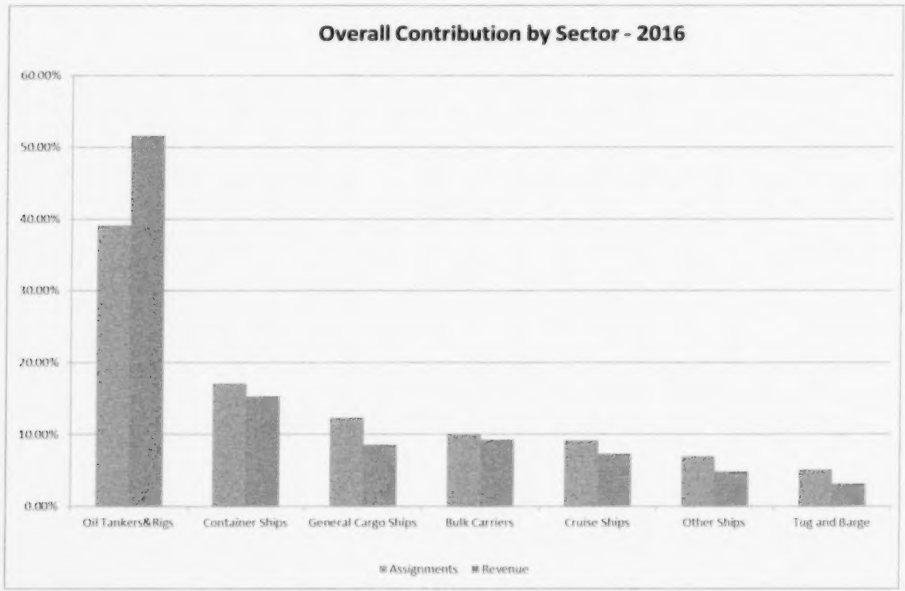
The total number of assignments for 2018 is estimated to be 8,323, decreased from the projected 2017 activity levels of 8,462 assignments. The amount of activity in ports serviced by the APA can vary significantly due to factors that are beyond its control. In 2017 the Authority has received assignments from projects or events that are not expected to continue. This includes a tall ship festival in the area, cable laying projects, and a bunker barge operation where the masters are becoming certificated. The widening of the Panama Canal is beginning to impact traffic patterns.

Of the 17 compulsory areas, there are four major ports that contribute approximately 75% of the Authority's assignments, and approximately 81% of revenues. These ports are Placentia Bay, NL, Halifax, NS, Strait of Canso, NS, and Saint John, NB. Much of the pilotage activity in the Atlantic Region is driven by the oil industry, with oil tankers being primary contributors in Saint John, Strait of Canso, and Placentia Bay. While tanker traffic is also important in Halifax, container ships are the primary contributor to that port which handles over 82% of the Authority's container ship traffic.

Foreign flagged vessels provide the great majority of the Authority's business. This fact has become even more pronounced after offshore supply vessels were exempted in 2006, as these

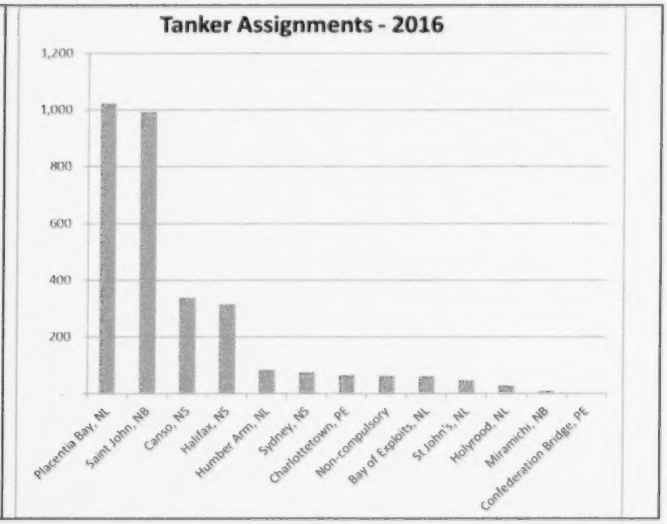
vessels are predominately Canadian flagged ships. The current trend is for foreign vessels to represent approximately 79% of assignments and revenue.

The oil and gas industry accounts for approximately 39% of the Authority's overall assignments, and contributes 52% of the overall revenue, based on current trends. The following chart indicates the overall contribution by different sectors.

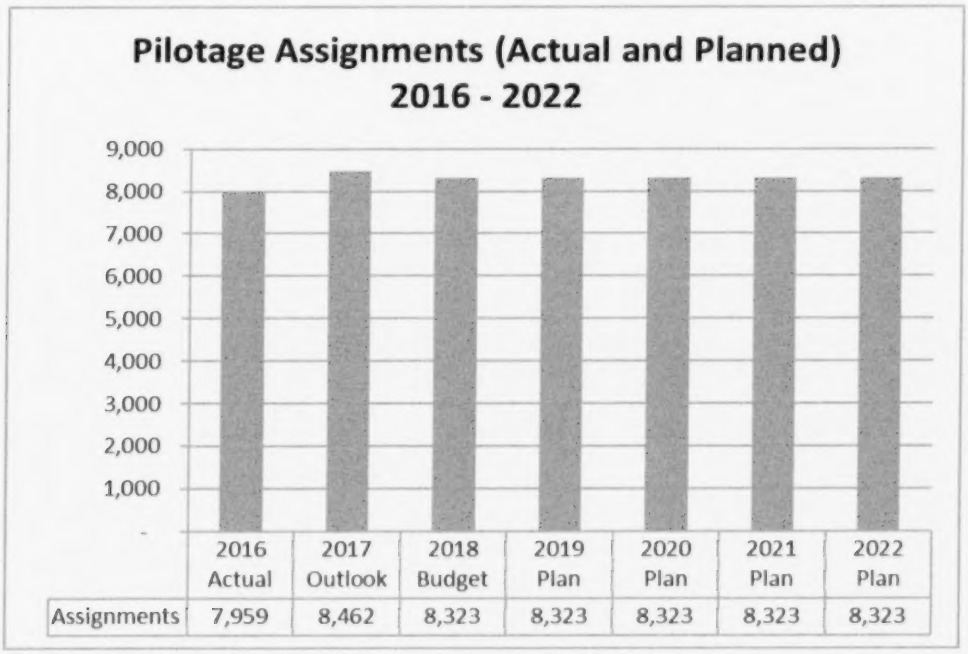


The Authority performed pilotage duties on tankers in twelve of the seventeen compulsory areas. Assignments that occur in non-compulsory areas usually are in conjunction with a compulsory assignment.

Area	Tanker Assignments
Placentia Bay, NL	1,023
Saint John, NB	993
Canso, NS	338
Halifax, NS	315
Humber Arm, NL	86
Sydney, NS	77
Charlottetown, PE	66
Non-compulsory	65
Bay of Exploits, NL	61
St John's, NL	47
Holyrood, NL	30
Miramichi, NB	11
Confederation Bridge, PE	2
Total	**3,114**



The chart below illustrates the annual assignments for 2016, the outlook for 2017, and the forecast included in the Plan for 2018-2022. The Authority has experienced declines in traffic recently, but has increased in 2017 with some activity that is not expected to continue into future years. The 2018 budget is based on what is known at this time. The plan conservatively projects activity levels to remain constant over the longer term. There are projects being considered by industry that may grow traffic within this planning period, but the Authority is taking a wait and see stance on possible growth.



	2016 Actual	2017 Outlook	2018 Budget	2019 Plan	2020 Plan	2021 Plan	2022 Plan
Assignments	7,959	8,462	8,323	8,323	8,323	8,323	8,323

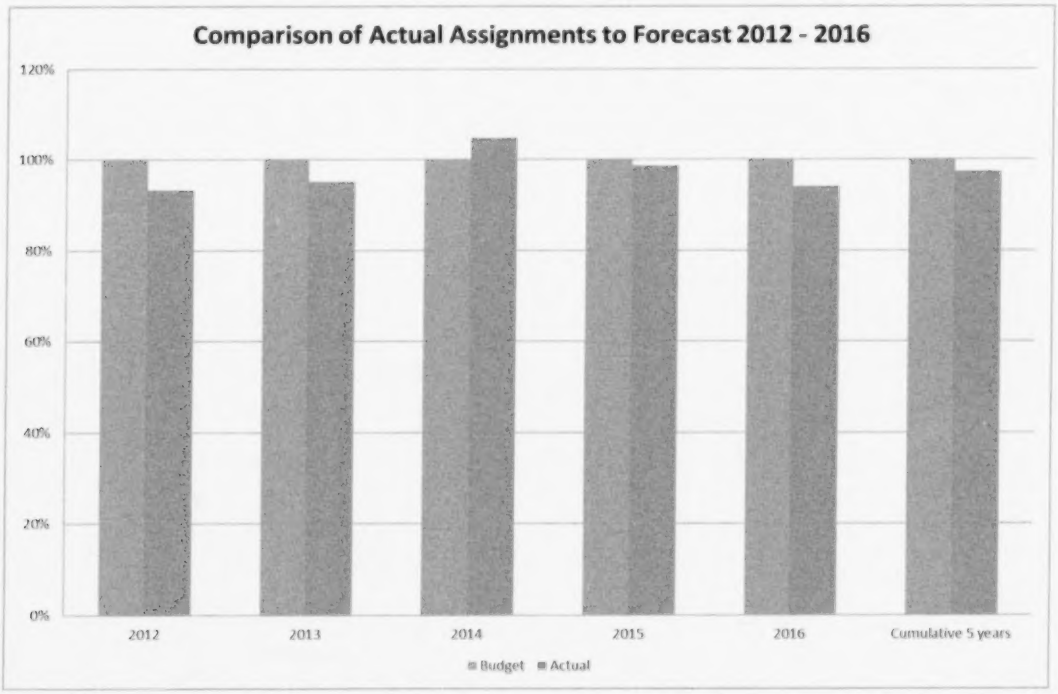
PILOTAGE CERTIFICATE USE

In accordance with the *Pilotage Act*, the Authority issues pilotage certificates to qualified masters upon successful completion of an examination, allowing these masters to pilot their own vessels. In 2014, there were 35 certificated masters who performed 1,063 assignments; in 2015, this number increased to 45 certificated masters completing 1,465 assignments. The number of movements done by certificated masters has increased again in 2016 with 40 certificated masters completing 1,678 assignments. The Authority receives no revenue from these assignments, and the increase in certificate assignments reduces the number of vessels the Authority pilots.

FORECASTING OF ANNUAL ASSIGNMENTS

The Authority's management conducts an annual forecasting exercise that is intended to enhance the accuracy of the financial statements and operational planning. These forecasts are compiled

through management research, and after consultation with the shipping industry, port authorities, shipping agencies, and other business representatives. In many cases, the Authority may be aware that shipping activity is to commence, or to cease, but the precise timing may not be available. When forecasting for a calendar year, it is not possible to know how much of the upcoming activity will fall within the twelve-month period, so the Authority must take a longer view of activity and the resources required to meet the demand. During the five complete years prior to the submission of this plan, the Authority's forecast has been 97.4% accurate compared to the actual results (assignments forecast was 42,477 while actual assignments were 41,371). The following chart indicates the results for each year, expressed in percentages, with the last columns representing the cumulative results. The forecast is charted as 100% each year in the blue column. The actual results are indicated by the red column.



3.4. COMPENSATION AND LABOUR RELATIONS INFORMATION

3.4.1 DESCRIPTION OF WORKFORCE

Statement of Human Resources
2014-2022

STATEMENT OF HUMAN RESOURCES
2014-2022

	ACTUAL 2014	ACTUAL 2015	ACTUAL 2016	OUTLOOK 2017	BUDGET 2018	PLAN 2019	2020	2021	2022
ADMINISTRATION									
EXECUTIVE OFFICERS	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
MANAGERS	2.0	2.0	3.0	3.0	4.0	3.0	3.0	3.0	3.0
SUPPORT	4.5	4.5	4.5	5.0	5.0	5.0	5.0	5.0	5.0
	9.5	9.5	9.5	10.0	11.0	10.0	10.0	10.0	10.0
OPERATIONS									
PILOTS	47.0	47.0	47.0	49.0	52.0	50.0	49.0	48.0	48.0
PILOT BOAT CREWS	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
DISPATCHERS	6.0	6.0	5.0	6.0	6.0	6.0	6.0	6.0	6.0
	71.0	71.0	70.0	73.0	76.0	74.0	73.0	72.0	72.0
TOTAL EMPLOYEES	**80.5**	**80.5**	**79.5**	**83.0**	**87.0**	**84.0**	**83.0**	**82.0**	**82.0**
ENTREPRENEURIAL PILOTS	9.0	10.0	11.0	10.0	11.0	11.0	11.0	11.0	11.0
TOTAL HUMAN RESOURCES	**89.5**	**90.5**	**90.5**	**93.0**	**98.0**	**95.0**	**94.0**	**93.0**	**93.0**

ADMINISTRATION

The Executive Officers for 2018 include the Chief Executive Officer and Chief Financial Officer. The Managers of the Authority will be the Director of Operations, the Director of Finance, the Director of Human Resources and the Pilotage Operations Manager. Support staff includes executive and administrative assistant positions.

The CEO position is appointed by the Board with remuneration approved by PCO. The salary ranges for the CFO and two Directors have been set by the Board as a specified percentage of the CEO range.

OPERATIONS

Under Operations, "Pilots" and "Pilot Boat Crews" refer to employees of the APA.

Pilots

The Authority recruits highly skilled Master Mariners with a significant and diversified experience within the shipping industry. Recruiting a mariner with this level of certification and career experience is a targeted audience, especially those who have sea time experience in the compulsory district for which we are recruiting. The Authority established the familiarization program upon the amendment of our APA Regulations - Section 14 General Qualifications – Experience at Sea – Applicants 14.1 (2) in 2014. The intention of the regulation is to aid in the recruitment of

qualified mariners that otherwise would not meet the trip qualifications within the district. This program increases our eligible pool of highly skilled and competent candidates to hire for future district Pilot positions. Operating in a dynamic maritime industry, this program becomes increasingly important to ensuring our future personnel have the professional expertise and work experience to meet our high standard for providing a safe and efficient pilotage service.

The Authority competes with private industry for this skilled labour and wages and benefit packages have to be comparable. The Authority stresses the work/life balance it can offer, the retirement benefits, and that being a pilot is seen by many as the pinnacle of a mariner's career. These factors can be attractive to a number of mariners and offset some shortages in wages. The corporation uses other pilotage authorities with salaried pilots as a benchmark for determining wages and benefits.

The Authority's Pilot age demographic is weighted towards those individuals nearing retirement. As historically, pilot progression takes between 24 – 36 months to reach a full Class A Unlimited Licence, it is critical for us to have access to competent and qualified resources to ensure continuity in our service during times of increased traffic or due to time lost due to injury. In 2013, the Authority reached a Memorandum of Agreement with the CMSG in which there is an incentive for pilots to provide notice of retirement. This agreement provides the Authority with an opportunity to properly plan pilot strength by pro-actively hiring new apprentices. Subsequent to this agreement, the Authority has received notice from several pilots regarding their plans to retire. Pilots are being added as replacements so that they can have two years of training before each pilot retires. Having a pilot retire without a suitable replacement able to compensate can have a negative effect for users.

The licence structure is outlined below:

Licence	Gross Tonnage	Note
Apprentice Licence	Training capacity	At the end of this phase, the apprentice must receive a passing mark on an extensive written and oral exam for their district.
Class C Licence	Does not exceed 10,000 GT	
Class B Licence	Does not exceed 40,000	Class B Limited
		Class B Unlimited
Class A Licence	Over 40,000 GT	Class A Limited
		Class A Unlimited

An Apprentice Licence, strictly restricts the holder to training trips under the supervision of a senior Class A Unlimited pilot within his/her district. Training is conducted on various types and sizes of ships. At no point during the Apprentice phase, does the holder complete pilotage assignments without supervision. As licence progression continues, s/he will perform pilotage assignments independently within their corresponding gross tonnage limitation. During this time, he/she performs training trips with senior district pilots on assignments above their current licence level. This process continues until the pilot receives a full Class 'A' Unlimited licence, allowing them to take all assignments within their district.

The following outlines the general application of training courses as related to the pilot progression through their increasing level of pilotage licence.

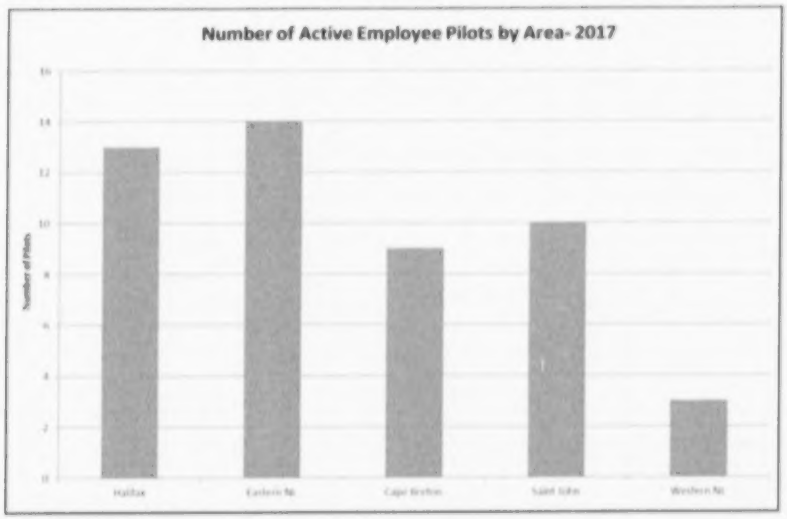
Mandatory Training Course	Location	Pilotage Licence Level Required
SealQ/PPU	Quebec	Apprentice
H2S Alive	Local Area	Apprentice
H2S Refresher	Local Area	Class C, B or A as required
Basic Manned Model	United Kingdom	Class B
Advanced Bridge Resource Management (BRM-P)	Quebec	Class C or Class B
Radar Errors	Quebec	Class C or Class B
Tug Escort	PEI	Class C, B or A
Z-Drive Tug	Quebec	Class B or Class A
Azipod	Quebec	Class B or A
Advanced Manned Model	France	Class A
Advanced Manned Model refresher	France	Class A (7 years after Advanced Manned Model)

The average cost to the Authority to train a pilot to an unlimited Class A licence over the initial two to three years is $250,000. The Authority has budgeted $370,000 for training courses for 2018.

The pilots are members of the Canadian Merchant Service Guild-Pilots. The Authority negotiated a new four-year agreement that expires at the end of 2019.

In response to the Special Examination recommendations, the Authority uses a Management Information System that contains information on marine qualifications, medicals, performance evaluations, and training progression for pilots and boat crews.

The following graph illustrates planned employee pilot allocation by the end of 2017.



Pilot Boat Crews

The pilot boat crews encompass three groups of employees that are considered operational.

Vessel Maintenance

The Authority employs two people that manage and maintain the APA vessels. The Fleet Technical Manager and the Pilot Boat Manager. These positions allow for increased leadership, technical management and preventative maintenance of our fleet.

Launchmasters

There are eight launchmasters who are employees of the Authority, four in Saint John and four in Halifax. The Launchmasters are members of the Canadian Merchant Service Guild-Launchmasters. A five-year collective agreement was negotiated in 2016 to remain in effect until the end of 2020.

Deckhands

There are eight deckhands who are employees of the Authority, four in Saint John and four in Halifax. The Deckhands are members of the Public Service Alliance of Canada-Deckhands and Office Staff. A four-year collective agreement was negotiated in 2015. The agreement expires on December 31, 2018.

Dispatchers

Included in the dispatchers' category is the Dispatch Manager position, who manages the dispatch centre and five full-time dispatchers, one of whom handles the billing. The dispatchers are employees of the Authority who work out of the Dispatch Centre located in the Authority's head office. They are members of the Public Service Alliance of Canada-Deckhands and Office Staff. As noted above, a new four-year collective agreement was negotiated in 2015. The agreement expires on December 31, 2018.

Diversity, Equity and Inclusion in Recruitment and Selection

In support of the Government of Canada initiatives to build a diverse public service, the Authority is committed to developing an inclusive, barrier-free work environment in which all persons have equal access to opportunities within the organization. Although the Authority is exempt from the Employment Equity Program due to the size of the organization, the spirit of this program is followed with an emphasis to fulfil its principles in the recruitment and hiring policies and processes. The challenge remains in two key personnel segments, Pilots and Pilot Boat Crew (Launchmasters and Deckhands). In total across the Atlantic districts, these job positions represent nearly 80% of our overall full-time workforce. The recruitment and hiring statistics for these positions reflect the demographics of the greater Canadian maritime industry. The Canadian maritime industry has historically seen a lack of equity and diversity of those individuals with

senior navigation credentials. Although, there is a shift towards greater equity and diversity in the nautical schools, it will be several years before these individuals will receive the required sea time, pass the required Transport Canada examinations for their certification and diversify their marine senior experience to meet the basic requirements for employment at the Authority. The APA is committed to continuing to work with its industry and government partners to ensure it has a pulse on the best practices for recruitment, selection and retention of the maritime labour force in order to diversify the Authority's resources.

ENTREPRENEURIAL PILOTS

Entrepreneurial Pilots are not employees of the APA, and derive their income from receiving a share of the tariff levied for an assignment. Entrepreneurial pilots are used in areas where there is very little traffic, no investment in assets by the Authority, or potential for large fluctuations in assignments. They do not provide service in the same districts as employee pilots. An Entrepreneurial Pilot is paid a percentage of the tariff rate for each pilotage assignment, thus assumes the financial risk. Based on the the Special Examination recomendation, service agreements are being negotiated with these individuals. Meetings were held with each pilot and a service agreement presented that specified the terms and service of pilotage to be delivered. The Authority has begun to receive the signed agreements from the individual pilots and expects all will be received by the end of 2017. Some employee pilots perform Entrepreneurial Pilotage in non-compulsory assignments during their off-duty time. Because these pilots are included above as employee pilots, they are excluded from Entrepreneurial pilot totals.

3.4.2 VOLUNTARY SEVERANCE

The post-employment severance benefit was provided to all employees under various collective agreements and employment contracts. As of 2012, this benefit is no longer offered to employees recruited by the Authority, but liabilities remain for 34 employees who did not choose to have the benefit curtailed immediately.

3.5 GOVERNMENT DIRECTION

3.5.1 DIRECTIVE ON PENSIONS

Section 16 of the *Pilotage Act* specifies that the Authority is deemed to be a Public Service corporation for the purposes of section 37 of the *Public Service Superannuation Act*. Employees of the Authority are members of the Public Service Superannuation Plan and contributions are made by the employees and the Authority to fund their future annuity. This plan aligns with the Government priorities and has the employee/employer cost sharing ratio of essentially 50:50.

The average retirement age of the employees of the Authority is approximately 62 years of age. The average age of pilots employed with the Authority is 52.0 years.

3.5.2 Directive on Travel, Hospitality, Conference and Event Expenditures

The Authority has established travel, hospitality, conference and event expenditure policies, guidelines and practices that are in alignment with Treasury Board policies and directives. The policies were implemented in June 2016 and revised in June 2017.

The Atlantic Pilotage Authority's area of operation is defined as all the Canadian waters in and around the provinces of New Brunswick, Prince Edward Island, Nova Scotia, and Newfoundland and Labrador, including the waters of Chaleur Bay in the Province of Quebec. Within this region, the Authority has designated 17 compulsory pilotage areas. Each one has its unique industries and are serviced by licenced pilots and the required infrastructure such as pilot boat services.

Conducting regular pilotage operations requires travel to be conducted by the Authority's pilots and boat crew. These costs are recovered directly from the customers for whom the services were delivered. Travel costs are also incurred for training of operational personnel as much of the training is done in Europe and Quebec City. These costs are included in the Authority's training budget. Included in the Pilot boats, operating costs category of the Authority's financial statements are travel costs associated with vessel maintenance personnel performing their regular duties.

Travel of pilotage authority board and management representatives is required to meet the needs of stakeholders in each area and manage the Authority's resources effectively. Periodic travel outside of the Authority's area of operation is also required to meet with Government representatives, industry associations, and the other pilotage authorities. Conferences include port specific marine business conferences and pilotage specific conferences. Board travel costs are captured with all other Board costs under professional and special services in the Authority's financial statements.

The table below shows the travel, hospitality, and conference expenses for operations, and for administrative employees and the Board.

Travel, Hospitality, and Conference Expenses

	ACTUAL	OUTLOOK	BUDGET		PLAN		
	2016	2017	2018	2019	2020	2021	2022
Operations	654	654	622	631	646	658	670
Training	50	50	56	56	58	60	62
Engineering	17	10	8	8	8	8	8
Total Operational Travel	**721**	**714**	**686**	**695**	**712**	**726**	**740**
Administration	140	106	122	117	119	122	125
Board	32	29	31	31	30	30	30
Total Administration Travel	**172**	**135**	**153**	**148**	**149**	**152**	**155**
Hospitality	9	10	11	12	12	12	12
Conference Fees	13	11	9	10	10	10	10
Total Hospitality and Conference Expenses	**22**	**21**	**20**	**22**	**22**	**22**	**22**
Total Travel, Hospitality, and Conference Expenses	**915**	**870**	**859**	**865**	**883**	**900**	**917**

3.5.3 Cost Containment

The Authority is a "non-appropriated" or self- financing Crown Corporation. A primary objective of the Authority is to maintain financial self-sufficiency by exercising effective cost management and establishing tariffs that are fair and reasonable. The costs of the Authority are charged to the users of the service in form of a tariff on each assignment for with pilotage services are provided. The Authority controls its administration costs while assuring any increased operating costs are offset by fair and reasonable tariffs.

The administration spending budgets for the APA are deemed to be the Dispatch budget, the Administration budget, and a portion of the Training budget related to administrative staff. The items in these budgets were separated into discretionary and non-discretionary items. In 2016, the APA reduced its administration and dispatch costs by 12.4% from 2015 levels.

For the Administration budgets in total, including both discretionary and non-discretionary spending, budgeted expenses are increasing temporarily by 8.9% for 2018 from 2017 budget levels. They are expected to decrease by 5.0% in 2019. This fluctuation is due to preparation for retirements as at least two employees will be retiring by the end of 2018. The Authority will be carrying extra staff in preparation for this as part of its continuity plan.

Administration Budget - 2018

	2017 Budget	2018 Budget	2018 Change over 2017 Budget
Discretionary Items			
Salaries & Benefits	1,628	1,922	294
Travel	147	122	(25)
Communication	46	46	-
Utilities, Materials, Supplies	314	283	(31)
Rentals	25	23	(2)
Professional & Special Services	59	64	5
Training	7	33	26
Amortization	76	93	17
Total Admin Discretionary Expenses	2,302	2,586	284
Discretionary Budget Increase			**12.3%**
Non Discretionary Items			
Board Fees & Allowances	123	101	(22)
Bad Debt Expense	20	10	(10)
Headquarters Office Space	158	171	13
Property and Business Taxes	4	4	-
Legal Fees	21	17	(4)
Internal Audit Fees	20	15	(5)
Transport Canada Fees	30	-	(30)
Canada Gazette Costs	10	18	8
Payroll Processing	13	13	-
Translation Services	8	8	-
Pilot Warrant Charges	7	10	3
Pilot Review Costs	7	10	3
Total Admin Non Discretionary Expenses	421	377	(44)
Non-discretionary Budget (Decrease)			**-10.5%**
Total Admin Expenses	2,723	2,963	240
Investment and Sundry Income	(26)	(26)	-
Total Net Administration	2,697	2,936	239
Total Administration Budget Increase			**8.9%**

The individual operating budgets for each port were deemed to be operating expenses. Amortization has been excluded as capital investment is required as the Authority continues to invest in pilot vessels and modern equipment. Increases in operating have been offset with equal or greater increases in budgeted revenues. The net operating Income is budgeted to increase in

2018, as is the final net profit. The Authority is targeting a net income for 2018 that satisfies its needs regarding being financially self-sufficient.

	2017 Budget	2018 Budget	Budget Difference 2018 over 2017 Budget
Revenues			
Operating Budgets			
Pilotage charges	24,801	26,406	1,605
Surcharge	329	167	(162)
Total Revenues	**25,130**	**26,573**	1,443
Expenses			
Pilots' fees, salaries and benefits	11,565	12,513	948
Pilot boats, operating costs	5,083	5,095	12
Pilot boat crews' salaries and benefits	1,827	1,889	62
Transportation and travel	595	622	27
Training	308	337	29
Professional and special services	139	148	9
Utilities, materials and supplies	62	88	26
Rentals	111	122	11
Communications	108	118	10
Financing Costs	156	146	(10)
Total Expenses	**19,954**	**21,077**	1,123
Net Operating Income	**5,176**	**5,496**	320
Less: Amortization	**1,597**	**1,561**	(36)
Discretionary Admin Costs	2,303	2,551	248
Non-Discretionary Admin Costs	420	412	(8)
Miscellaneous Income	(27)	(27)	-
Total Admin Costs	**2,697**	**2,936**	239
Profit	**881**	**999**	118

Pilotage charges are $1,443,000 higher due to larger vessels than captured in the previous budget, and the 2018 tariff increase.

Operating Expenses are budgeted to increase $1,123,000 due primarily to the Authority increasing pilot strength to prepare for imminent retirements.

3.6 Special Examination, 2016

The Office of the Auditor General of Canada presented its Independent Audit Report covering selected systems and practices that were in place between 1 October 2015 and 31 March 2016 to the Board of the Authority on 1 September 2016 All recommendations have been addressed, and completion of all items will be achieved by the end of 2017. The recommendations from the report, followed by the Authority's response and update on the implementation of each recommendation, are listed below.

Corporate Management Practices

Recommendation 1: The Board should ensure that its members comply with all provisions of the Corporation's conflict of interest code, including the requirement to provide written disclosure to the Chairperson of all business and commercial interests where such interests might be construed as being in actual or potential conflict with their duties as Board members, so that appropriate mitigations can be put in place.

The Corporation agreed with this recommendation. Since the period under examination, Board members and management have provided written disclosure of all business and commercial interests which might be construed as an actual, potential, or perceived conflict directly to the Chairperson as required by the Corporation's conflict of interest code. The Chairperson will put in place appropriate mitigations, as required, based on the topics or issues under consideration.

Recommendation 2: The Corporation should periodically review its mission, vision, and strategic objectives. The Corporation should ensure that its strategic objectives are easily measured and assign responsibility to specific managers for achieving them. The Corporation should also establish expected results for the strategic objectives and link them to management's performance objectives.

The Corporation agreed with this recommendation. At the time of the audit the Authority had a strategic session scheduled with a facilitator to update these items. This session was held in June 2016 and the mission, vision, and strategic objectives were updated and are contained in this plan. These items will be reviewed annually and targeted for an update in 2021. The Corporation's updated strategic objectives are easily measured and have been assigned to specific managers to achieve them.

Recommendation 3: The Corporation should ensure that its tariff-setting processes take into account its legislated requirement to be financially self-sufficient.

The Corporation agreed with this recommendation. The Authority experienced operating losses in three of the four fiscal years prior to the audit period. The Authority was able to put a surcharge in place to recover three quarters of the cumulative loss over a three-year period with an agreement from the Authority and industry to review its success annually and evaluate its continued need. As part of the Authority's June 2016 strategic planning sessions, criteria were set to measure financial self-sufficiency based on annual targets to fund capital asset replacement and future severance payouts, while allowing for economic downturns.

The Authority has a $1.2 million profit in 2016, offsetting the cumulative loss specified in the special examination. The projected profit for the Authority in 2017 is $1.9 million, which is well above budget and will allow for the savings targets to be surpassed for the year. This Corporate Plan reflects tariffs that were set at a level intended to achieve the targeted criteria for savings for 2018 by reaching the lower range of the Board-specified profit target in 2018 (3.8%) and maintaining this profit through 2022.

Recommendation 4: The Corporation should regularly monitor implementation of its risk mitigations and formalize its reporting on these mitigations to the Board.

The Corporation agreed with this recommendation. Risk mitigation activities had been reported to the Board on an ad hoc basis, but since the period under examination, a committee of the Board has been tasked with oversight of risk mitigations. The first meeting of this committee was held during the fourth quarter of 2016 with subsequent meetings held twice annually.

Management of Pilotage Services

Recommendation 5: The Corporation should implement information management that facilitates its ability to demonstrate the health and competence of its pilots and pilot boat crews.

The Corporation agreed with this recommendation. In its response to the recommendation, the Corporation committed to developing a more robust information management structure by the end of 2016. In August 2016, the Authority deployed a marine information management system that is being used to store the records associated with the health and competence of the pilots and pilot boat crews. Further to these initial steps, an internal audit project was conducted to evaluate the current structure and status of the Authority's document management as a whole, and provide recommendations for further improvement. These recommendations are being implemented in 2017.

Recommendation 6: The Corporation should ensure that documented contracts are in place with entrepreneurial pilots to specify the terms and conditions of pilotage service delivery.

The Corporation agreed with this recommendation. The CEO and CFO have met with entrepreneurial pilots in all areas, have presented draft contracts for each pilot. The Authority has begun to receive the signed agreements from the individual pilots and expects all will be received by the end of 2017.

Recommendation 7: The Corporation should formalize its good practice of requiring consensus among its committees of senior pilots before advancing the licences of trainee pilots. The Corporation should maintain documentation of this consensus, along with the final recommendation letter issued by the committee chairperson.

The Corporation agreed with this recommendation. The requirement of obtaining consensus from the committees of senior pilots has been formalized. The Corporation maintains documentation of this process along with the recommendation letter from the committee chairperson.

Recommendation 8: The Corporation should ensure that it fully implements and consistently applies a performance management process for all pilots and pilot boat crews. The Corporation should also assign responsibility for reviewing performance management information, with the aim of ensuring proper oversight and follow-up of actions.

The Corporation agreed with this recommendation. Since the period under examination, the first cycle of performance review of each fully licensed pilot has been completed. There are operational and logistical challenges that affect the planning and timing of these reviews. A second cycle of performance reviews has begun with every fully licensed pilot to be assessed by the end of 2018. As this will be the second cycle of performance reviews, lessons learned from the initial cycle have been implemented.

Since the period under examination, a clause to facilitate performance reviews with employee launchmasters has been negotiated in the most recent collective agreement. A similar clause was included in the collective agreement for the employee deckhands in 2015. The performance review process for employee pilot boat crews has been approved and all employees were assessed early in 2017 and will be repeated annually. The Human Resources Manager is responsible for reviewing performance management information, providing oversight, and assuring follow-up actions are taken.

Recommendation 9: The Corporation should implement a cyclical review to demonstrate reconsideration of the designation of every compulsory pilotage area under its responsibility at least once every five years. The periodic review should also demonstrate reconsideration of the size and types of vessels subject to compulsory pilotage. The Corporation should also ensure that recommendations from preliminary risk analyses of non-compulsory pilotage areas are addressed promptly.

The Corporation agreed with this recommendation. A review was conducted in July 2016 by management and the Board and repeated in 2017. This review examined each compulsory pilotage area for changes in traffic volume and vessel types. The Board evaluated each area to determine if further examination was required at this time and the Risk Committee was tasked with proceeding on the recommendations. This process is now conducted annually by the Board as part of the strategic planning sessions.

Since the preliminary risk analysis of non-compulsory ports in Nova Scotia, the Corporation also performed similar analyses for New Brunswick and Newfoundland and Labrador. Since these scans began in 2010, the Corporation completed preliminary scans on 22 ports—18 non-compulsory and 4 compulsory areas. The findings of the preliminary risk analyses were weighted by the Board and PRMM reviews were prioritized as resources to conduct these reviews are limited. The preliminary risk analysis for Nova Scotia was updated for any changes in risk factors and a full PRMM for Sheet Harbour, NS is in process with Pictou, NS planned to follow.

Recommendation 10: The Corporation should perform annual inspections on all pilot boats, owned and contracted.

The Corporation agreed with this recommendation. Since the period under examination, management developed an annual pilot boat inspection schedule and all inspections were completed by the end of 2016 and will be annually thereafter.

3.7 Enterprise Risk Management Framework

The Authority has established an Enterprise Risk Management framework to identify and mitigate risks to the corporation. Risks were initially identified with the assistance of external consultants through a thorough analysis of the enterprise's environment. Any existing mitigation to help reduce the likelihood or impact of the risk was considered, and additional mitigation was identified and where practicable, implemented for each risk. This analysis initially identified 29 risks, which were reduced to 25 risk categories through refining the definitions and combining like risks. The risks were ranked after a thorough review by the Board and Management of the Authority. It is understood that the risk categories are not static, and a regular review is required. The review may identify new risks, may determine that risks have decreased through sufficient mitigation to reduce their likelihood or impact, or may determine that the risk level has increased due to changes in circumstances. The Risk Committee of the Board has been tasked with monitoring Management's progress on implementing the mitigation plans for each risk.

Each of the risks is graded on two scales, likelihood that the event will occur and the impact if it does happen. The likelihood is graded from 1 – Rare to 5 – Almost Certain, while the impact goes from 1 – Inconsequential to 5 – Catastrophic.

The scoring is tabulated and the risk categories fall into one of four categories. High risk items are identified in red, medium risks are in orange, and low risks are in yellow and minor risk items in green.

RISK RANKING

	Impact				
Likelihood	Inconsequential 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost Certain 5					
Likely 4					
Possible 3					
Unlikely 2					
Rare 1					

Risk	Description
VERY HIGH Red	Requires detailed research, planning and decision making at senior levels of management
HIGH Amber	Senior management attention and action needed
MEDIUM Blue	Management control responsibility must be specified
MINOR Yellow	Monitoring by Management required, further action optional
LOW Green	No major concern and can be managed by routine controls and procedures

While it is important to be cognizant of all risk factors, the high-risk categories demand the most priority, followed by the medium risk categories. The following risk categories were identified:

APA Risk Categories- 2017 Ranking

Very High

- Injury to pilot/crew member while transferring

High

- Risk of being unable to Attract and Retain Pilots to meet Demand
- Loss of Contracted Launch Services or Manning Contract
- Loss of Launch Services causing Major Interruption of Service

Medium

- Risk of Accident Caused by Human Error
- External Economic Risk

Minor

- Pilotage Service Cannot be Provided in Minor Ports due to Lack of Proficiency
- Certificate Holders Evaluations
- Operating Costs exceeding amount budgeted when tariffs are determined

Low

- Safety Compromised due to Pilot Fatigue/Under the Influence
- Safety Compromised due to Boat Crew Fatigue/Under the Influence
- Risk that Employees are exposed to Injury or Illness in the Workplace
- Administration Staff Coverage
- Pilot Vessels not meeting TC Inspections

- Unable to Attract and Retain Adequate and Trained Relief Pool for Pilot Boat Crew
- Interruption of Service due to Breakdown in Labour Relations
- Customer Satisfaction
- APA Involvement in Non-Comp Ports
- Safety Compromised due to Inappropriate Pilotage Area Designation
- Loss or Misuse of Information, Data, or Other Assets
- Governance/Organizational Structure/Succession Planning
- Safety/Service Compromised due to Interruption to the Dispatch Operation
- Business Continuity
- Fraud
- Management Information

The table below indicates the very high, high risks, and medium risks with current mitigation, and additional mitigation strategies being considered.

Risk	Description	Current and Additional Mitigations
VERY HIGH		
Injury to pilot/crew member while transferring (Human Resources)	The risk that a pilot/crew member suffers an injury while transferring from or to a vessel. These transfers are done thousands of times annually in all types of weather conditions involving many types of vessels. It is this activity that exposes some of our employees to the greatest danger.	Ø If a pilot has concerns about the pilot ladders or equipment on a vessel being serviced, they are encouraged to bring it to the APA's attention immediately so it can be addressed with the ship's agent or owner. Ø The Authority has deployed a man overboard retrieval and beacon systems in each area that has employee pilots. This includes each pilot wearing a personal locator beacon. (PLB) Ø The Authority has invested in new pilot boats in Saint John and Halifax that will provide a more stable platform for over 50% of the APA's assignments. Ø Pilot boats supplied by the Authority or the contractors are deemed suitable platforms for the areas serviced. The boats are also well maintained to assure proper operation and surfaces for transfer. Ø Safety procedures are in place for the transferring of pilots, including procedures required of APA employees and pilot ladder requirements for vessels. Ø Boats are equipped with man overboard equipment, crews are trained to utilize the equipment, and regular drills are conducted. Ø Launchmasters are skilled shiphandlers and highly trained with proper qualifications to handle the APA's pilot boats. If a pilot has concerns about a launchmaster or deckhand, they are encouraged to report to management so action can be taken. Ø Robust OHS system is in place with updated manuals and regular committee meetings. Standard Operating Procedures are constantly monitored and updated in support of pilot transfers. Man-overboard procedures are practiced periodically and safety equipment is inspected and replaced if necessary. OHS training for new hires and refreshers for employees will continue Ø Pilots are required to have medicals regularly to assure ability to do physical component of job Ø Pilots have the authority to suspend pilotage operations if it is deemed to be too severe to provide the service. Ø Deckhands are required to have up-to-date first aid training Ø A new electronic procedures were put in place to allow for easier reporting of near-misses and will be presented for "lessons learned" at each OHS committee meeting. Ø 6 and 7 year-old vessels were purchased from Netherlands to add two modern and stable platforms to the fleet. Ø Contract pilot boats are being evaluated for man overboard recovery systems. The goal is to bring them up to the standards deployed on the Breau boats. Ø Contract pilots will be required to have medicals done annually, similar to employee pilots, when contracts are negotiated with body-corporates. Ø Job safety analysis is being done in 2017.

HIGH		
Loss of Launch Services causing Major Interruption of Service (Quality of Service)	The risk is that the APA loses launch service, severely disrupting operations.	Ø A pilot boat manager position was added to plan maintenance and manage the fleet of vessels and crew. Ø Additional spare equipment has been added to inventory to minimize down time. Ø Drawings of each boat are being updated to facilitate quicker and more efficient responses to equipment breakdowns. Ø An engineer is on staff with a high level expertise to facilitate repairs more quickly and perform preventative maintenance. Ø New vessels have been deployed to add reliability in the ports of Saint John and Halifax while freeing up older boats to add redundancy. Ø The APA has backup vessels in most of the ports in which it uses pilot boats. The Authority also has arrangements with external contractors to provide service if required in some ports. Ø Maintenance is scheduled to allow for sufficient redundancies in ports to assure that operations are not disrupted. Ø Vessels are maintained constantly to reduce the amount of down time that will also reduce the risks of available boats. Ø The deployment of boats is discussed regularly and any changes are examined thoroughly to assure efficiency and reduce risks to service delivery. Ø Inspections will be staggered to reduce the risk caused by too many dry dockings required in a short period of time.
Risk of being unable to Attract and Retain Pilots to meet Demand (Quality of Service)	The risk that the APA is unable to attract and retain pilots to meet demand.	Ø Pilots are also able to earn extra money in overtime and shares for non-compulsory work. Ø The schedule and ability to be at home makes piloting much more attractive to many than going to sea for extended periods. Ø The last collective agreement was changed to provide more incentives for training pilots to push to move up in class more quickly by increasing the number of salary ranges. Ø Amendments to the APA regulations were made to allow a port familiarity program rather than actual trips under certain circumstances. This program will use simulations with a variety of conditions to replace or supplement doing actual trips, to maintain proficiency. Ø Due to changes in the regulations, the APA is now advertising nationwide for potential pilots. Ø The Authority pays a fair wage with an attractive benefits package which is deemed to be sufficient for the work required. Ø The Authority works closely with industry to predict traffic levels and determine required staffing levels. The APA also considers the comments of pilots regarding their concerns regarding coverage and future retirements or traffic requirements. Ø An eligibility list is kept with qualified individuals who are interested in becoming pilots if an opening arises. These lists are maintained in ports where there is an expected need in the coming years. Ø Minor Ports - Paying 85% of the tariff allows the Authority to attract contract pilots in areas where traffic and revenues can fluctuate. Ø Training logs for candidates are monitored to determine if the required effort is being put in for the pilot to move through the classes. If they are

		not, meetings are held with the pilots, requirements are expressed, and further discipline is taken if required. The probationary period was adjusted in the latest agreement and can be extended beyond one year in these circumstances. Ø Retirements and coverage are being monitored to determine when to advertise for additional mariners. Miramichi, PEI and Pugwash are the focus. Ø Training and reporting on progress of candidates has been formalized to reduce the chance that bias or manipulation can slow the progress of pilots moving through the classes. Ø Management of the APA is attending job fairs with the aim of encouraging young mariners to target a career as a pilot. Ø The application process is being improved by technological additions to the website, including electronic application functionality.
Loss of Contracted Launch Services or Manning Contract (Quality of Service)	The risk is that the APA has a disruption in service due to the loss of a contractor who provides crewing for a pilot boat or crewing and pilot vessel.	Ø Contracts have provisions where contractors must give substantial notice if they are pulling out of the contract. This allows the APA to get expressions of interest and a replacement. Ø Knowing the community and having a list of possible replacements at hand. Ø For ports where pilot boats are supplied by a contractor, part of the agreement requires them to provide a backup boat as well. Ø New vessels from Netherlands adds two modern and stable platforms to the fleet. This increases the APA owned fleet and provides additional resources and coverage if a contractor pulls out of an area where they provided a vessel and crew. Ø APA will have all documentation on file regarding vessels as specified in service agreements

MEDIUM		
Risk of Accident Caused by Human Error (Safety of Environment)	The risk that pilots and boat crews are not assessed for competence and quality of service leading to poor or unsafe service being provided.	Ø There are open lines of communication between employees, customers, and APA management that brings some areas of concern to the forefront. Ø Pilots are in a position to report if the performance of the boat crew is not satisfactory. Ø An incident management plan has been developed that would help mitigate the consequences should an accident occur. Ø An agreement was made with the pilots regarding a post incident protocol regarding the investigation of an incident and how a pilot involved can be treated. Ø An agreement was finalized with the pilots regarding a near miss protocol regarding the investigation of near misses and how a pilot involved can be treated. Ø The APA performs pilot evaluations on a three-year cycle. Ø The APA performs employee evaluations of its pilot boat crews and will continue to seek input from its pilots who work with these boat crews on a daily basis. Ø A training matrix assures pilots have the required training when needed. Ø Documentation is acquired and tracked in pilot employee file regarding district pilots discussion and decisions regarding employees advancing in class. Ø SeaIQ PPU's are being deployed in areas where they will benefit in training and pilot decision making. Ø Halifax - the APA participated with the Port Authority in a study called iHeave to determine the under keel clearance in the shallowest part of the harbour during various weather scenarios and various vessels. Ø Miramichi - the Coast Guard provides annual soundings in the river to determine the allowable draft in the area.

External Economic Risk (Financial Self-Sufficiency)	The risk is that economic conditions outside of the Authority's control will lead to actual traffic levels or mix and/or costs being materially different than that forecasted by the Authority.	Ø The fuel charge was implemented which removes the risk of changing fuel prices from pilot boat operating costs. Ø The Authority was able to implement a 1.5% surcharge in place for 36 months to recover the majority of previous losses. Ø The Line of Credit was increased to $2.5 million to protect against further decline. Ø The Authority consults with stakeholders regularly to determine future traffic changes. Forecasts from some stakeholders are sometimes seen as proprietary information which may cause some reluctance to provide it. Ø The APA monitors developments within industries serviced, both at the local level (shutdowns or production slowdowns) and at the global level (trends, for instance, in pulp and paper production). Ø Resources (ie. pilot levels) are planned to handle variations in traffic. Ø The Authority is targeting net current assets of twice current liabilities to provide financial flexibility during downturns. Ø Tariff structures were adjusted to increase basic charges and minimum charges to reflect more directly the costs incurred. This protects against changes in the traffic mix from what was expected. Ø The APA is targeting larger returns to allow for a variance from budgeted traffic before there would be a significant loss.

The Authority has developed mitigation strategies for all twenty-five identified risks and are reviewed twice per year by the Risk Committee of the Board.

3.8 Pilotage Risk Management Methodology (PRMM)

When reviewing the possibility of designating a compulsory pilotage area, it is expected that such designation not be imposed indiscriminately. It must be the result of appropriate research and evaluation of all the facts and of meaningful consultation with the stakeholders. There must be clear justification that compulsory pilotage is warranted to enhance safety and protect the marine environment. A risk management approach for pilotage was developed that was compliant with the Canadian Standards Association CAN/CSA-Q850.

The APA has developed a two-tier approach to the PRMM process. An initial high-level scan (referred to as a Phase I Review) of a broad geographic area is conducted to determine whether ports within the area require a full PRMM review. Upon completion of the Phase I Review, an evaluation is made whether ports require a full PRMM review and a priority list of ports requiring a full review is determined.

Between 2010 and 2017, the APA had preliminary scans (Phase 1) completed on 22 ports or areas-18 non-compulsory and 4 compulsory ports. The first Phase 1 review was completed on ports in Nova Scotia, followed by New Brunswick, and then Newfoundland. While four ports were identified for further review in Nova Scotia in 2010, shortly after the review commercial traffic ceased or declined precipitously in two of these ports. Subsequent Phase 1 reviews in the other provinces identified ports with greater risk factors that took priority over the remaining two NS ports. The APA had a further review of the two remaining NS ports, Sheet Harbour and Pictou,

conducted in 2016. A full PRMM review is being conducted on Sheet Harbour in 2017. The intention is to follow this review with a full PRMM on the port of Pictou in early 2018.

The PRMM approach provides an interactive process consisting of easy to follow steps which, when taken in sequence, provide for a consistent, transparent and well-documented decision-making process. Risk control strategies or risk reducing strategies are evaluated in terms of needs, issues and concerns of all affected stakeholders. The PRMM stresses the importance of involving stakeholders from the outset and maintaining good documentation throughout all stages in the process. This process was recommended by the Minister of Transport and the development of the process was spearheaded by Transport Canada in cooperation with the pilotage authorities.

The APA has been proactive in conducting PRMM studies. The Authority has conducted eleven full study PRMM analyses in recent years on the following subjects:

- vessel size and types subject to compulsory pilotage;
- the Miramichi River Compulsory Pilotage Area to determine if it should remain compulsory;
- the approaches to Voisey's Bay to determine whether compulsory pilotage was required;
- the St. Croix River and Port of Bayside to determine whether compulsory pilotage was required;
- the Port of Belledune to determine whether compulsory pilotage was required;
- the Port of Argentia to determine whether this port should become part of the Placentia Bay Compulsory Pilotage Area;
- the Conception Bay area in Newfoundland to determine whether the compulsory area should extend to certain anchorages within the Bay;
- the port of Long Pond within Conception Bay to determine whether compulsory pilotage was required;
- the area of Loon Bay on the north coast of Newfoundland to determine whether compulsory pilotage was required;
- The port of Goose Bay in Labrador to determine whether compulsory pilotage was required;
- to determine whether it would be prudent to establish an inner pilot boarding station in the vicinity of Buffet Island in Placentia Bay, NL for ships in ballast.
- The port of Sheet Harbour in Nova Scotia to determine whether compulsory pilotage is required (ongoing in 2017).

The initial recommendation for the St. Croix River and Port of Bayside, Voisey's Bay, and the Port of Belledune was for these areas to become compulsory. Voisey's Bay did become compulsory; the St. Croix River and Port of Bayside underwent a further review and the recommendation was withdrawn as conditions in the area had changed; and the Port of Belledune was recommended to become compulsory, but had objections lodged upon publication in the Canada Gazette Part I. As a result, the Minister of Transport appointed an Investigator to review the proposed regulations. The review has been completed and is pending Minister approval.

The Authority regularly monitors developments within its jurisdiction to identify areas in which circumstances have changed necessitating a PRMM review.

4.0 OBJECTIVES, STRATEGIES, PERFOMANCE MEASURES AND OUTCOMES

4.1. EXPECTED OUTCOMES

A CLEAN ENVIRONMENT AND A STRONG ECONOMY

Clean Environment

The Authority contributes to the safe and efficient movement of goods and people for Canadians, while protecting the environment from harm. The economic benefits of the services provided are difficult to measure as the benefit derived by users is primarily preventative. Pilotage plays a key role in ensuring that there are no ship source environmental disasters in Canadian waters. The Authority's work is expected to benefit Canadians by protecting marine ecosystems, a sustainable fishing industry, a vibrant tourism industry, and local infrastructure. The Authority tracks and subsequently reports all shipping incidents as a means of measuring these outcomes. These indicators are discussed further in section 4.3.5.

Number of shipping incidents – Target 100% of assignments without incident.

Progress towards this goal is included in the quarterly financial statements and the annual report. Over the previous 5 years, the Authority has performed 41,370 assignments with 23 incidents reported. That is 99.94% of assignments performed without incident. There were no injuries or environmental damages associated with any of these incidents reported.

The Authority is unique in Canada in the number of assignments performed on Oil and LNG Tankers. Over the previous 5 years, the Authority's pilots have performed 16,224 tanker assignments without an incident causing environmental damage.

On rare occasions, the Authority responds to emergency situations as shown in two recent examples where tankers had to divert to Halifax due to mechanical failures. A tanker that was fully loaded with 775,000 barrels of crude oil as well as 3,000 m^3 of bunker fuel lost its rudder forty nautical miles off the coast of Nova Scotia in a gale in December 2014. Another tanker loaded with 845,000 barrels of crude oil plus bunker fuel suffered a mechanical failure in January 2016, reducing its maximum speed to only three knots. Using the data provided by the local weather buoy, APA pilots were able to determine the safe operating windows during which the vessels could be effectively controlled with escorting tugs and the vessels were brought safely into the harbour.

Strong Economy

Pilotage ensures the most prompt and efficient vessel transits possible. The skilled dispatchers coordinate with shipping agents, masters, pilot boats, and tug resources to assure pilots are available and vessels can be moved on a 24 hour, 365-day basis in 17 individual compulsory ports or areas. Pilot boat crews transport pilots quickly and safely between assignments to minimize wasted time and resources. The local knowledge and ship handling skills of the Authority pilots allow for vessels to transit congested and active ports effectively and efficiently.

Management and pilots are also made available to industry and stakeholders by the Authority to provide consultation on marine projects. These projects include terminal and dock designs, simulation of vessel passages, and evaluation of new operations. A list of recent consultation services is provided below in section 4.3.4.

The Authority tracks and subsequently reports on the number of complaints or "non-compliances" submitted by stakeholders and the number of assignments in which pilots were supplied within one hour of the firm order time. These measures are discussed in more detail in section 4.3.1.

Number of assignments without complaint – Target 100%.

Progress towards this goal is included in the quarterly financial statements and the annual report. In 2016, 99.7% of assignments were performed without complaint.

Number of assignments in which pilots were supplied within 1 hour of firm order time – Target 100%

Results of performance is included in the annual report. In 2016, 99.50% of assignments were deemed to have been performed on time.

In late 2016, the Authority conducted its first Customer Satisfaction Survey as a means to collect feedback from stakeholders, customers, service providers and ship masters regarding their level of satisfaction with the pilotage service. When asked to grade the Authority's commitment to safe pilotage operations, 94.9% of respondents were satisfied or very satisfied. The efficiency of marine pilotage services provided by the APA received 86.1% satisfaction grades.

4.2. OBJECTIVES

CORPORATE OBJECTIVES

The Authority's corporate objectives are the following

1. To deliver safe and effective marine pilotage services in Atlantic Canada.

2. To maintain financial self-sufficiency by exercising effective cost management and establishing tariffs that are fair and reasonable.

3. To provide a reliable and self-sustaining service by safeguarding the Authority's people and assets while planning for succession and asset replacement.

4. To assume a leadership role in marine navigation by providing an expertise in navigational safety and marine operations.

5. To contribute to the Federal government's environmental, social, and economic policies as they apply to the marine industry in Atlantic Canada.

4.3. STRATEGIC GOALS

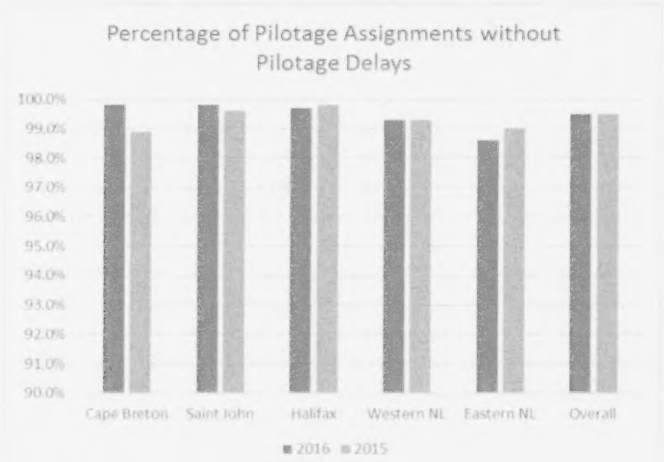
4.3.1 To deliver safe and effective marine pilotage services in Atlantic Canada.

The Authority determines the staffing levels for each compulsory pilotage area based on the customer requirements and the expected activity in each port. Occasionally, if traffic levels peak too high, delays may be incurred. Staffing for these rare peaks would be too costly for the customers of the port. The Authority works with individual ports constantly to deal with these peak periods.

The Authority developed a structured methodology for handling complaints several years ago in response to the Ministerial Review of Outstanding Pilotage Issues. The mechanism is designed to be as user friendly as possible, and the goal of the Authority is to ensure that timely feedback is provided to the complainant. The most common reason for a complaint to be submitted was due to a delay in an assignment. In some cases, the delay is caused by factors beyond the control of the Authority, such as weather or delays caused by the non-availability of port services such as tugs.

The Authority received 22 (19 in 2015) complaints out of a total of 7,959 (8,348 in 2015) assignments during 2016. The remaining 99.7% (99.8% in 2015) of assignments were performed without receiving a complaint from the customer. All complaints received are included in the above total, including those submitted that involved delays not caused by the Authority.

For 2016, the Authority provided service within one hour of the ordered time on 99.5% of assignments, compared to 99.5% in 2015 (excluding delays caused by factors beyond the Authority's control). It is expected that the service level in 2017 will be similar to 2016. The following chart provides the results for each port or district.



The Authority continued to experience improved service levels in Eastern NL and Cape Breton due to actions previously taken. Each port also has additional challenges regarding geography, weather, and pilot boat availability. It was determined that the APA had not staffed enough pilots

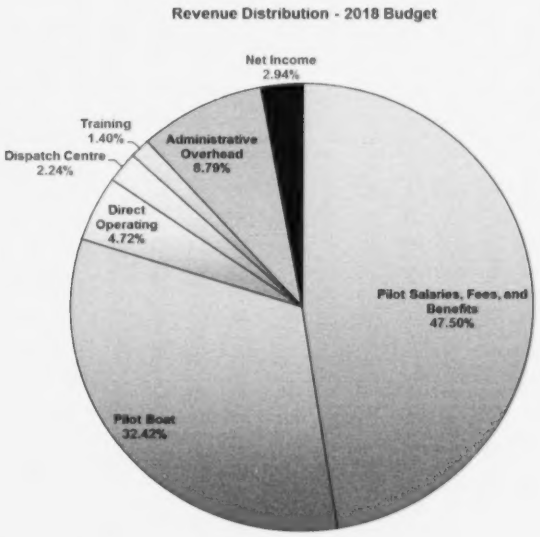
in these areas to withstand unexpected loss of manpower, and these losses are becoming more frequent as the workforce ages.

In Eastern NL, the Authority has been very active in trying to address the problem. Pilots have been added to the area with the goal of carrying 14 in the district. The pilot boat manning contract was put to tender and a new manning company is now providing the service with fewer interruptions.

For Cape Breton, the Authority has determined that carrying only seven pilots in the area was not sufficient with the long-term illness faced in the workforce. Two apprentice pilots were added late in 2014 with an additional pilot added in 2016 to replace the pilot who retired. There are now eight Class A Unlimited pilots and one Class B Unlimited pilot in Cape Breton.

4.3.2 To maintain financial self-sufficiency by exercising effective cost management and establishing tariffs that are fair and reasonable.

Financial self-sufficiency can only be maintained by controlling expenses, and maintaining an adequate revenue base. The following graph indicates the budgeted percentage of revenue disbursed by major categories for the 2018 Budget year. This does not include revenue generated from the surcharge. It is expected a similar distribution will be in place in future years.



Pilot salaries are the largest cost category; therefore, the number of pilots employed has a significant impact on the Authority's finances. Potential retirements, future traffic levels, and the extended training period required are all factors to consider when planning apprentice pilot recruiting. Apprentice pilots create additional salary costs while not providing the productivity of more senior pilots. However, should apprentices not be hired, the Authority may be left without

sufficient pilot strength for the level of activity in an area. Therefore, striking a balance is important.

A thorough analysis of each compulsory pilotage area is undertaken each year, with a primary goal of providing the required service at a minimal cost. If reductions in expenditures in an area can be achieved without affecting the safety or effectiveness of the service, then this course of action is followed. If tariff increases are necessary to avoid cross-subsidization, the minimal amount of increase necessary is proposed. These increases are targeted at each area, rather than as a general tariff increase. Planned tariff changes are discussed in section 4.4. Regulation Changes and Tariff Adjustments.

Operational Summary

Atlantic Pilotage Authority

	2014 Actual		2015 Actual		2016 Actual		2017 Projected		2018 Budgeted	
	Revenue	% Change	Revenue	% Change	Revenue	% Change	Revenue	% Change	Revenue	% Change
Tanker	11,620	6.4%	11,062	-4.8%	12,271	10.9%	12,891	5.1%	12,874	-0.1%
Cargo	4,597	14.4%	4,849	5.5%	4,258	-12.2%	4,736	11.2%	4,810	1.6%
Container Ship	2,495	-6.9%	2,981	19.5%	3,634	21.9%	3,846	5.8%	4,329	12.6%
Cruise Ship	1,745	-4.8%	1,974	13.1%	1,739	-11.9%	2,257	29.8%	2,425	7.4%
Other	2,041	-0.5%	1,756	-14.0%	1,887	7.5%	2,202	16.7%	1,968	-10.6%
Total Revenues	22,498	4.6%	22,622	0.6%	23,789	5.2%	25,932	9.0%	26,406	1.8%
	Expenses	% Change	Expenses	% Change	Expenses	% Change	Expenses	% Change	Expenses	% Change
Pilot Salaries and Benefits	10,555	7.3%	11,091	5.1%	11,209	1.1%	11,619	3.7%	12,513	7.7%
Pilot Boat and Facility Costs	8,249	4.7%	7,763	-5.9%	7,548	-2.8%	8,577	13.6%	8,541	-0.4%
Other Operating Costs	1,123	22.5%	1,111	-1.1%	1,239	11.5%	1,220	-1.5%	1,244	2.0%
Training Costs	320	189.5%	284	-11.3%	315	10.9%	315	0.0%	370	17.5%
Adminsitrative and Dispatching	2,869	8.5%	2,924	1.9%	2,559	-12.5%	2,661	4.0%	2,906	9.2%
	23,116	8.1%	23,173	0.2%	22,870	-1.3%	24,392	6.7%	25,574	4.8%
Profit (Loss) without Surcharge	618		551		**919**		**1,540**		**832**	
Surcharge	-		-		278		343		167	
Assignments	8,472	1.6%	8,348	-1.5%	7,959	-4.7%	8,462	6.3%	8,323	-1.6%
Pilots	47.0	11.9%	47.0	0.0%	47.0	0.0%	49.0	4.3%	52.0	6.1%
Return On Revenue	-2.7%		-2.4%		3.9%		5.9%		3.2%	
Tariff Increase	4.62%		5.28%		2.95%		4.12%		3.33%	
Ave. Pilotage Rev per assign	2.656	4.39%	2.710	2.04%	2.989	10.30%	3.065	2.53%	3.173	3.53%

Overall, for the Authority, traffic has increased in 2017 due to temporary traffic described earlier. This is budgeted to decrease to around 8,323 assignments for 2018. A growth in the number of assignments done with certificates has contributed to a decline in smaller tanker and cargo traffic. Cruise traffic is quite strong in 2017 and scheduled to grow further in 2018. The Authority continues to investment in additional pilots as notices of retirement are received. A significant investment was made in 2017 in the launching of two additional pilot boats, which increases pilot boat and facility costs above. Training costs are budgeted to increase based on scheduled training based on pilot progression. Administrative costs increase in 2018 temporarily as the Authority restructures to meet demand and prepare for pending retirements. A tariff increase for 2018 is in regulation with adjustments proposed for three ports and the removal of the surcharge.

Dispatch

The Authority provides dispatching services throughout its region from a dispatch centre located at its head office. The total cost of the dispatch operation in 2018 will be approximately $589,000 and this amount has been included in the budget. The dispatching service provides significant information and added value to pilots, customers, port authorities, and management through controlled access web pages established for each group. The web pages are continuously updated from the Authority's Dispatch and Billing System as the dispatcher enters data. Customers and pilots are able to contact dispatch by telephone, e-mail, facsimile, VHF radio, and telex. As the service evolves, it continues to increase the efficiency of the Authority's operations while adding value for customers and employees. The APA has developed the capability to monitor vessel movements in the major ports and their approaches through a computer program utilizing the Automatic Identification System (AIS). The AIS is required on all commercial vessels, and the APA has also installed transmitters and receivers on its pilot boats.

Pilot boat costs

The APA has three models for pilot boat operations:

1. In the Strait of Canso, and all minor ports, a contractor provides both the boat and the crew.

   The Authority prefers that all pilot boat contracts be paid on a "per trip" basis. This avoids a situation where a guaranteed annual amount of money is paid that has no relation to the number of assignments and revenue in that port. This principle is followed with a few minor exceptions to address local issues in a port.

2. In two of the major ports, Halifax and Saint John, the Authority owns and operates pilot boats, with the crew being employees of the APA. The Authority attempts to use its own boats in the most efficient manner possible and to control costs where possible. The boat crews are APA employees and their costs do not fluctuate with activity in the port.

3. In Placentia Bay and Sydney, the Authority owns the vessels, with the manning contracted out to a local company.

   The Authority requires the contractor to use the APA boats efficiently while safeguarding the assets.

The APA prefers to have a variable cost in those ports in which a private contractor provides service. This is accomplished by having a "per trip" rate that will fluctuate with the volume of traffic.

Please see Appendix B for more information on APA owned pilot boats.

4.3.3 To provide a reliable and self-sustaining service by safeguarding the Authority's people and assets while planning for succession and asset replacement.

Annually, the Authority determines required pilot strength for each port or district based on forecasted activity, service requirements, succession planning, and consultation with industry. Pilots are hired, trained, and licenced for specific ports or districts, and must remain current in those areas for which they are licenced. As an example, an experienced pilot licenced in Halifax, NS could not be utilized in Saint John, NB, without undergoing extensive further training and licencing in that port. This requirement that pilots have valid port-specific licences and current local knowledge of a port limits the utilization of pilots to cover assignments in another port.

The number of pilot boat crew and maintenance is based on the requirement to provide pilot transport twenty-four hours per day, 365 days per year in a safe and efficient manner. The dispatch center operates with the minimal amount of personnel required to have the center available around the clock. The management and administrative personnel levels are required to manage the business of the Authority while preparing a succession plan.

The Authority has eighty-three full time employees. This complement includes 49 pilots, 18 pilot boat crew members (including maintenance), 6 dispatch personnel, and 10 management and administrative personnel. Please see Section 3.4.1 for a summary of the Human Resources budget and plan.

The Authority employs highly skilled and qualified pilots. Professional development is emphasized, and the Authority makes a significant financial commitment to ensure that the best available training is provided. The pilots are supported by competent pilot boat crews and dispatchers who work as a team to provide the best possible service to the customer. The Authority employs professional and proficient management and support staff to administer the operations.

The licensed pilots and the pilot boat crews are trained to conduct a safe marine pilotage service. The Authority monitors the requirements for each port and staffs accordingly, after consultation with stakeholders. Pilotage and the marine industry are undergoing rapid technological change. The Authority evaluates and modifies training programs to deal with the rapidly evolving technology. The Authority uses a Management Information System to log marine qualifications, medicals, performance evaluations, and training progression for pilots and boat crews.

4.3.4 To assume a leadership role in marine navigation by providing an expertise in navigational safety and marine operations.

The Authority makes its pilots available to assist industry and communities with various marine projects. Recent projects on which the Authority provided consultation and assistance include the following:

Newfoundland

- Assisted North Atlantic Refinery with a new bunker supply operation. Initial project ideas included a mono buoy, dredging at the dock to allow vessels to berth and bunker, and a bunker delivery vessel (final decision). The refinery will now be able to capture vessels entering the emissions control zone requiring low sulphur diesel.
- Long Harbour simulations and risk assessments to reduce tug requirements for certain vessels – positive commercial impact for Vale (reduced cost and increased flexibility)
- Simulated a very large cruise vessel for St. John's harbour, providing confidence and identifying environmental criteria to pilot and berth the vessel – large economic impact for the city (3500 passengers).
- Hebron Project: The Authority's pilots are provided input for the arrival of the 35,000 tonne Utilities Process Module for the Hebron Platform in Bull Arm.

Nova Scotia

- Sydney cruise terminal expansion and dock configuration. This will allow two cruise ships to berth simultaneously eliminating the need for an anchored vessel to tender passengers, ultimately making the port more marketable and attractive. The dock will also be used for commercial interests in the off season.
- Bear Head LNG support. From dock configuration, vessel approaches and berthings to emergency maneouvers and contingency planning – nearly 50 simulations conducted in Rhode Island with TC in attendance. Substantial TermPol support.
- Extensive support for the port of Halifax with regard to the MacDonald Bridge re-decking. North-bound traffic management, risk assessments, stakeholder relations and contingency planning.
- I-Heave project to determine the dynamic under keel clearance for the larger container vessels that have been, and will continue to call Halifax. This study was also meant to determine whether a change to operational procedures are required to accommodate container ships in excess of 8,700 TEU. Recently, 14,000 TEU ships began to target Halifax and this study will answer questions in this regard as well.
- Port of Halifax Master Plan, providing input and consultation as the Port develops plans for berthing two Ultra-Large Container Ships simultaneously at one terminal.
- The Authority provided input with regards to mooring requirements for vessels arriving and departing at the new Irving Oil Woodside Marine Terminal.

New Brunswick

- Simulations for larger cruise vessels into Saint John in order to maximize the tidal window. The result is increased duration in the port which equates to a positive economic impact for the community.
- Dock design, configuration and TermPol support for the Energy East project.
- Consultation and simulations regarding the $205 million West Side Modernization and Expansion Project in Saint John.
- For the Miramichi, the Authority has been involved in assessing the area for possible winter navigation of the river.

In 2017, the Authority was involved with the event coordinators for Rendez-vous 2017 in the planning and logistics related to the tall ship festival in the Atlantic Provinces. The festival included more than 30 vessels, of which many visited the compulsory ports of Halifax, Pugwash, Canso, Sydney, Saint John, Miramichi, Charlottetown, Confederation Bridge, and Humber Arm, as well as the non-compulsory ports of Pictou and Shelburne.

The Authority has also tested and helped develop cost effective portable pilotage units (PPUs) that would be beneficial to the specific port pilotage done in the Atlantic region. The PPU's are brought onboard by the pilot and have to be setup before the pilot takes conduct of the vessel. The PPU is essentially a computer that receives digital information from the ship, other ships, the shore, cellular transmissions, and satellite. It is used by pilots to provide the specific information in real-time that is most valuable to assist with navigation and training.

Establishment of Weather Buoys in Atlantic Region

The APA has been a strong supporter of a joint initiative to establish weather buoys in key areas in the Atlantic region. This joint initiative, known as SmartATLANTIC, is spearheaded by the Canadian Marine Pilots Association and has had the support of the APA, the Halifax Port Authority, the Saint John Port Authority, Canaport LNG, and Irving Oil Limited. It has been endorsed by the Shipping Federation of Canada. The Authority does not make a financial contribution to the capital cost or launch of these buoys, but does share in the annual operating costs after deployment. The APA views this as contributing to its mandate of providing, in the interests of safety, an efficient pilotage service in its higher volume ports (*Pilotage Act Section 18*). The current weather information and weather forecasts provided by these buoys provide both a margin of safety and a more efficient operation. Customers are able to see forecasts that allow them to determine whether they should make arrangements to bring a ship in, and pilots are able to more accurately judge safety margins.

In late 2013, a weather buoy was placed off Herring Cove in Halifax Harbour, and that buoy became operational in early 2014. This project was possible because of the financial support of the Governments of Canada and Nova Scotia; the research expertise of Dalhousie University; the $60,000 annual operational contributions of the APA and the Halifax Port Authority; and in-kind contributions of the Canadian Coast Guard.

In early 2015, the new weather buoy in Saint John, NB was deployed. The capital costs for this project was provided by Transport Canada ($185,000), the Province of New Brunswick ($91,000), Saint John Port Authority ($91,000), with in-kind contributions from AMEC Environmental & Infrastructure, the Canadian Marine Pilots' Association, and the Canadian Coast Guard. The buoy was built by AXYS Technologies Inc. of Sidney, British Columbia. The operating costs will be shared by the APA, the Saint John Port Authority, Canaport LNG, and Irving Oil. The annual portion of these costs for the APA is $30,000. This buoy is of great benefit to the shipping community in Saint John by providing real-time meteorological/oceanographic data to allow the production of high-resolution forecasts that are available to the public through the internet or smart phone. In addition to forecasting, the research community benefits greatly from real-time data that

includes air temperature, humidity dew point, barometric pressure, wind speed, water temperature, salinity, current speed, current direction, wave height, wave direction, and wave period.

For the APA, the establishment of these buoys enhances safety and allows for more efficient use of manpower. It is estimated that, prior to the deployment of these buoys, weather-related delays cost the Halifax marine industry approximately $2.6 million annually, with the cost in Saint John in excess of $1 million. With more accurate and precise forecasts, the marine stakeholders will be able to have better operational planning with respect to ordering tugs, pilots, port labour, and ground transportation. It is expected that the improved planning provided by weather buoy information will allow the delay related costs to be substantially reduced.

This initiative benefits many public sector users such as Environment Canada, the Canadian Coast Guard, the Department of Fisheries and Oceans, Transport Canada, the Canadian Hydrographic Service, the Halifax Port Authority, the Saint John Port Authority, and the APA. It also benefits the private sector and the public at large through increasing the safety margin for aquaculture and fishers, recreational boaters, tourism operators, shipping lines, port terminal operators, and infrastructure and land use planners.

The APA has committed to providing funding of operating costs of a similar buoy for the Strait of Canso, NS, if other partners can be found for that area. The maximum amount that the Authority would provide would be a similar amount to the one in the Port of Saint John.

The APA believes that this initiative is vitally important in reducing risk to its customers and to the APA pilots and boat crews, and would be an essential factor in improving safety of the marine environment for all those who derive their living or pursue recreational interests in these areas. The Authority commends Transport Canada for their support of the SmartATLANTIC Weather buoy initiative.

4.3.5 To contribute to the Federal Government's environmental, social, and economic policies as they apply to the marine industry in Atlantic Canada.

A primary purpose of the Authority is to protect the environment and communities from marine incidents. During 2016, there were 6 shipping incidents reported by the Authority's pilots. There were no injuries or environmental contamination associated with any of these incidents. All incidents are categorized below:

Type of Incident	2016	2015
Damage to Equipment		
Contact with wharf	3	3
Contact with port equipment	2	1
Contact with sea bed	1	0
Total incidents causing damage	6	4

The Authority is also committed to operating in a manner of governance that is consistent with the policies of the Federal Government. The Authority has put policies in place to assure the travel,

hospitality, and event policy of the APA was consistent with Treasury Board Policy. The Authority has also met all reporting requirements consistent with openness and transparency to the public.

4.4 Regulation Changes and Tariff Adjustments

Tariffs

The Authority will submit tariff adjustments for two years, one set effective upon registration for 2018, and a second set of increases effective for January 1st, 2019. After analyzing projections for coming years, and consulting with industry, the Authority has determined that three of the seventeen compulsory ports would require tariff adjustments in 2018 to remain financially self-sufficient on a port-by-port basis and provide the service levels required by industry, without cross-subsidization. The Authority has also determined that due to the stronger than expected financial results in 2016 and 2017, the surcharge can be ended earlier than currently specified while allowing the Authority to reach its financial goals. The tariff adjustments are as follows:

Effective January 1, 2018, or if it is later, on the day on which they are registered:

Humber Arm – The Authority has been struggling in the area due to the high cost of a winter pilot boat needed to service the area from December to April. The boat is operated by a primary customer in the port. The Authority will be proposing a winter pilot boat charge recovering the actual cost of any alternate pilot boat used from mid-December to mid-April. The Authority will investigate other options during these winter months to minimize this cost.

Pugwash – The tariff in the area (Average of $726 per assignment) is making it difficult to attract new pilots while keeping a pilot boat operator. The pilot boat operator is paid out of the tariff above and the contract pilot receives 85% of the remainder. The APA will be proposing to split the cost of the pilot boat (currently $320) out of the tariff and have it recovered separately. This will allow the pilot to earn 85% of the current tariff without being reduced by the cost of the pilot boat.

Charlottetown - Charlottetown is another area that is serviced by entrepreneurial pilots and a pilot boat operator. A Prince Edward Island pilot that helps covers the area has retired. The Authority has had difficulty recruiting a replacement. To assist with recruitment, the Authority is implementing a separate pilot boat recovery charge in 2008, which will leave more of the tariff available to pay the pilot. The current cost of a pilot boat is approximately $200.

Lastly, due to an increase in larger vessels calling in the Strait of Canso, the Authority will be replacing the approved 5% increase effective on January 1, 2018 with a 3% increase effective January 1, 2018, or on the day on which they are registered, if later.

The cost to industry from these 2018 tariff adjustments is estimated to be $3 thousand in 2018 and an additional cost of $125 thousand in 2019.

Effective June 30, 2018

There is a 1.5% surcharge still in effect, scheduled to expire no later than March 2019. Based on the recent financial performance of the Authority, the APA proposes to end this surcharge nine months early on July 1st, 2018. The Authority is projecting its profit to be $1.4 million over target since the surcharge was implemented, thus reducing the need for the surcharge. The early removal of the surcharge will save users $260,000.

Effective January 1, 2019:

The Authority is projecting that fourteen of the seventeen compulsory ports require tariff adjustments in 2019 to remain financially self-sufficient on a port-by-port basis and provide the service levels required by industry, without cross-subsidization. The total increase is 2.31%.

Pugwash	10.00%	Holyrood	3.00%
Bay of Exploits	7.00%	Sydney	3.00%
Stephenville	7.00%	Bras d'Or Lake	3.00%
Humber Arm	5.00%	Strait of Canso	2.50%
Confederation Bridge	5.00%	Placentia Bay	2.50%
Saint John	3.00%	Charlottetown	2.00%
St. John's	3.00%	Halifax	1.50%

The Authority conducts extensive consultation with local and national shipping interests. Committees have been formed for each of the major pilotage areas and with the Shipping Federation of Canada.

The Authority has established a Joint Committee with the Shipping Federation of Canada (SFC). The SFC/APA Committee is made up of the Chair of the Federation's pilotage committee, other members of the Federation, and the Executive Officers of the Authority. The Committee's objective is to provide a forum in which users can have constructive discussions with the Authority on operational, financial, or administrative issues, with the view to enhance the partnership between the Authority and its users. In addition to this Joint Committee, the Authority has established pilotage committees comprised of industry representatives, agents, and other stakeholders in individual ports. The Authority hosts meetings with these port committees at least twice each year, and discusses the operational and financial aspects of the individual port. These discussions contribute greatly to the Authority's efforts to maintain financial self-sufficiency by providing valuable information about prospects for changes in business in each port, and by allowing the Authority to match resources with the requested service levels. The Authority's operating plans and capital investment were discussed with these groups, as well as the tariff proposal for 2018 and 2019. The consensus of the people in attendance is that the proposal is fair and reasonable and there is support for the investments being made.

4.5 Key Performance Measures

Corporate Objectives Key Measures:

In order to achieve our identified outcomes of making positive contributions to ensuring a clean environment and strong economy, as well as, achieve our strategic goals related to safety, efficiency and financial self-sufficiency, we intend to measure progress using the following indicators:

1. To deliver safe and effective marine pilotage services in Atlantic Canada.
    a. Number of shipping incidents – Target 100% of assignments without incident.
        2016 – Result was 99.92%.
    b. Number of assignments without complaint – Target 100%.
        2016 – Result was 99.7%
    c. Number of assignments in which pilots were supplied within 1 hour of firm order time – Target 100%
        2016 – Result was 99.5%
2. To maintain financial self-sufficiency by exercising effective cost management and establishing tariffs that are fair and reasonable.
    a. Admin overhead target of no greater than 9% of revenues.
        2016 – Result was 8.5% of revenues without the surcharge.
    b. Maintain an adequate contingency fund – Target - Net Current Assets will be a minimum of 2 times current liabilities at year-end.
        2016 – Result was a ratio of 2.27:1 at the end of the even though the goal had been set for 2017 and beyond.
    c. Contribute to savings for future unfunded liabilities (severance) – Target a minimum of $200,000 annually, less scheduled payouts made during the year, to be placed in dedicated bank or investment account. (Updated annually based on fund projections) This target was set for 2017 and beyond.
    d. Contribute to savings for future boat replacement – Target a minimum of $200,000 annually to be placed in dedicated bank or investment account. This target was set for 2017 and beyond.
3. To provide a reliable and self-sustaining service by safeguarding the Authority's people and assets while planning for succession and asset replacement.
    a. Number of days/hours of case management time associated with a work-related injury - Target 0. This target was set for 2017 and beyond.
    b. Unscheduled launch downtime – Targets i) Total downtime days causing operational delays/total days = 0% ii) Total downtime days not causing delays/total days = 1%. This target was set for 2017 and beyond.
    c. Maintain a minimum of a 1:1 ratio between the number of people on the eligibility lists for each port or district, and the applicable notices of pending retirements received. The current eligibility lists satisfy this requirement.
4. To assume a leadership role in marine navigation by providing an expertise in navigational safety and marine operations.
    a. Provide required employee training – Target 100% of training set by training matrix and plan. This was achieved in 2016.

b. Perform pilot assessments – Target is that every fully licenced employee pilot will be assessed at least once every three years. The first cycle was completed and the Authority is on schedule with its second cycle of reviews.

5. To contribute to the Federal government's environmental, social, and economic policies as they apply to the marine industry in Atlantic Canada.
   a. Pollution reports from pilot launches – Target 0.
      2016 – there were 0 pollution reports in 2016.
   b. Provide all reporting to Ottawa or published on the APA website by the required dates – Target 100%
      2016 – all reporting was completed and submitted, or posted, by the required dates.

5. FINANCIAL STATEMENTS (ACTUAL 2016 DATA, 2017 OUTLOOK AND 2018-2022 FINANCIAL PLAN)

The Authority implements its strategies to accomplish its objectives. The financial implications are summarized below in Sections 5.1 through 5.6. The column headings in these tables represent the following:

- Actual 2016 - the audited financial results for the year
- Outlook 2017 - based on seven months of actual results and a forecast for the remainder of the year.
- Budget 2018 – based on operating budgets and forecasted activity summarized in Section 8 of this report.
- Plan 2019 – 2022 – based on forecasted activity and costs with extrapolations where specific information is not known.

5.1 STATEMENT OF INCOME
FOR THE YEARS ENDED DECEMBER 31
(000's)

	ACTUAL 2016	OUTLOOK 2017	BUDGET 2018	PLAN 2019	2020	2021	2022
INCOME							
PILOTAGE CHARGES	$ 23,790	$ 25,932	$ 26,406	$ 27,093	$ 27,787	$ 28,342	$ 28,909
INTEREST & OTHERS	26	49	26	26	27	27	28
TOTAL INCOME	23,816	25,981	26,432	27,119	27,814	28,369	28,937
EXPENSES							
PILOTS FEES, SALARIES, AND BENEFITS	11,208	11,619	12,513	13,006	13,521	13,926	14,344
PILOT BOATS	4,458	5,327	5,095	5,203	5,250	5,303	5,356
STAFF SALARIES AND BENEFITS	1,534	1,708	1,922	1,777	1,833	1,879	1,926
PILOT BOAT CREWS' SALARIES AND BENEFITS	1,768	1,869	1,889	1,941	1,981	2,020	2,061
OPERATIONS TRANSPORTATION	654	654	622	631	646	658	670
ADMINISTRATIVE TRAVEL	140	106	122	117	119	122	125
HOSPITALITY	9	10	11	12	12	12	12
CONFERENCES	13	11	9	10	10	10	10
PROFESSIONAL AND SPECIAL SERVICES	408	320	303	306	313	318	322
TRAINING	313	315	370	350	350	350	350
RENTALS	280	325	303	151	153	156	159
COMMUNICATION	134	154	163	162	161	163	164
UTILITIES, MATERIALS, AND SUPPLIES	480	455	460	449	445	454	464
AMORTIZATION	1,375	1,430	1,672	1,758	1,772	1,719	1,668
FINANCING COSTS	123	138	146	203	170	149	123
TOTAL EXPENSES	22,897	24,441	25,600	26,076	26,736	27,239	27,754
NET INCOME BEFORE SURCHARGE	$ 919	$ 1,540	$ 832	$ 1,043	$ 1,078	$ 1,130	$ 1,183
SURCHARGE REVENUE	278	343	167	-	-	-	-
PROFIT FOR THE YEAR	$ 1,197	$ 1,883	$ 999	$ 1,043	$ 1,078	$ 1,130	$ 1,183
RATE OF RETURN	5.0%	7.2%	3.8%	3.8%	3.9%	4.0%	4.1%

5.2 Statement of Financial Position
Years Ended December 31
(000's)

	ACTUAL 2016	OUTLOOK 2017	BUDGET 2018	IFRS 16 2018 ADJUST	PLAN 2019	2020	2021	2022
ASSETS								
CURRENT								
CASH	$ 2,083	$ 2,470	$ 2,872	$ -	$ 2,980	$ 2,769	$ 2,863	$ 3,087
CASH - SEVERANCE FUND		200	300	-	600	1,000	1,492	1,459
CASH - BOAT REPLACEMENT FUND		1,000	1,200	-	1,800	2,400	3,000	4,000
ACCOUNTS RECEIVABLE	2,902	2,850	2,907	-	2,965	3,024	3,085	3,147
PREPAID EXPENSES	71	90	95	-	97	99	101	101
INVENTORY	-	-	-	-	-	-	-	-
	5,056	6,610	7,374	-	8,442	9,292	10,541	11,794
FIXED								
LEASE ASSET	-	-	-					
CAPITAL AT COST	19,430	23,310	24,427	1,048	26,280	27,530	28,305	29,080
LESS ACCUMULATED AMORTIZATION	9,791	10,139	11,811	166	13,735	15,507	17,226	18,894
	9,639	13,171	12,616	882	12,545	12,023	11,079	10,186
	$ 14,695	**$ 19,781**	**$ 19,990**	**$ 882**	**$ 20,987**	**$ 21,315**	**$ 21,620**	**$ 21,980**
LIABILITIES								
CURRENT								
ACCOUNTS PAYABLE	$ 1,695	$ 1,941	$ 1,675	$ -	$ 1,700	$ 1,725	$ 1,750	$ 1,775
CURRENT PORTION OF BANK LOANS	449	640	658	-	676	695	649	716
CURRENT PORTION DEFERRED LIABILITY		59	59	151	210	210	214	216
TERMINATION BENEFITS	83	37	281	-	72	118	146	90
	2,227	2,677	2,673	151	2,658	2,748	2,759	2,797
LONG TERM								
BANK LOANS	3,333	5,592	4,934	-	4,258	3,563	2,914	2,198
DEFFERED LIABILITY		410	439	804	1,100	951	792	624
TERMINATION BENEFITS	1,386	1,470	1,313	-	1,370	1,374	1,346	1,369
	4,719	7,472	6,686	804	6,728	5,888	5,052	4,191
TOTAL LIABILITIES	6,946	10,149	9,359	955	9,386	8,636	7,811	6,988
CONTRIBUTED CAPITAL AND EQUITY								
EQUITY	7,749	9,632	10,631	(73)	11,601	12,679	13,809	14,992
	7,749	9,632	10,631	(73)	11,601	12,679	13,809	14,992
	$ 14,695	**$ 19,781**	**$ 19,990**	**$ 882**	**$ 20,987**	**$ 21,315**	**$ 21,620**	**$ 21,980**

5.3 Statement of Changes in Equity
Years Ended December 31
(000's)

	ACTUAL 2016	OUTLOOK 2017	BUDGET 2018	IFRS 16 2018 ADJUST	PLAN 2019	2020	2021	2022
RETAINED EARNINGS, BEGINNING OF YEAR	$ 6,555	$ 7,749	$ 9,632	$ -	$ 10,558	$ 11,601	$ 12,679	$ 13,809
(LOSS) GAIN FOR THE YEAR	1,197	1,883	999	(73)	1,043	1,078	1,130	1,183
OTHER COMPREHENSIVE (LOSS)	(3)	-	-	-	-	-	-	-
TOTAL COMPREHENSIVE INCOME (LOSS)	1,194	1,883	999	(73)	1,043	1,078	1,130	1,183
RETAINED EARNINGS, END OF THE YEAR	$ 7,749	$ 9,632	$ 10,631	$ (73)	$ 11,601	$ 12,679	$ 13,809	$ 14,992

5.4 STATEMENT OF CHANGES IN FINANCIAL POSITION
YEARS ENDED DECEMBER 31
(000'S)

	ACTUAL 2016	OUTLOOK 2017	BUDGET 2018	PLAN 2019	PLAN 2020	PLAN 2021	PLAN 2022
OPERATING ACTIVITIES							
CASH PROVIDED BY (USED FOR) OPERATIONS							
NET PROFIT (LOSS) FOR YEAR	$ 1,194	$ 1,883	$ 999	$ 1,043	$ 1,078	$ 1,130	$ 1,183
ITEMS NOT REQUIRING CASH							
AMORTIZATION	1,375	1,430	1,672	1,758	1,772	1,719	1,668
ASSET WRITE OFF	126	48	45	55	55	50	50
INCREASE (DECREASE) IN EMPLOYEE TERMINATION BENEFITS- SEVERANCE	123	121	124	129	122	118	113
	2,818	3,482	2,840	2,985	3,027	3,017	3,014
CASH PROVIDED BY (USED FOR) NON-CASH WORKING CAPITAL	352	366	(240)	32	29	24	15
EMPLOYEE TERMINATION BENEFIT PAYMENTS	(204)	(83)	(37)	(281)	(72)	(118)	(146)
CASH PROVIDED BY OPERATING ACTIVITIES	$ 2,966	$ 3,765	$ 2,563	$ 2,736	$ 2,984	$ 2,923	$ 2,883
FINANCING ACTIVITIES							
CASH PROVIDED BY FINANCING							
LOAN RECEIVED ACTIVITIES	-	3,000	-	-	-	-	-
LOAN PAYMENTS	(435)	(550)	(640)	(658)	(676)	(695)	(649)
CAPITAL LEASE PAYMENTS			(59)	(210)	(214)	(216)	(218)
	(435)	2,450	(699)	(868)	(890)	(911)	(867)
INVESTING ACTIVITIES							
(INCREASE) DECREASE IN INVESTMENTS	-	-	-				-
ADDITIONS TO CAPITAL ASSETS	(777)	(4,628)	(1,162)	(860)	(1,305)	(825)	(825)
DISPOSAL OF CAPITAL ASSETS	-	-	-	-	-	-	-
CASH USED FOR INVESTING ACTIVITIES	(777)	(4,628)	(1,162)	(860)	(1,305)	(825)	(825)
INCREASE IN CASH AND SHORT TERM INVESTMENT DURING THE YEAR	$ 1,754	$ 1,587	$ 702	$ 1,008	$ 789	$ 1,187	$ 1,191
CASH, BEGINNING OF YEAR	329	2,083	3,670	4,372	5,380	6,169	7,355
CASH, END OF YEAR	$ 2,083	$ 3,670	$ 4,372	$ 5,380	$ 6,169	$ 7,355	$ 8,546

5.5 KEY FINANCIAL RATIOS
YEARS ENDED DECEMBER 31

	ACTUAL 2016	OUTLOOK 2017	BUDGET 2018	PLAN 2019	2020	2021	2022
PROFIT MARGIN	5.0%	7.3%	3.8%	3.9%	3.9%	4.0%	4.0%
DAYS COVERAGE	78	94	101	114	122	136	149
CURRENT RATIO (W/O DEDICATED FUNDS)	2.27	2.02	2.20	2.27	2.14	2.19	2.26
RETURN ON TOTAL ASSETS	7.7%	10.9%	5.0%	5.1%	5.1%	5.3%	5.4%
DEBT TO EQUITY	0.90	1.05	0.88	0.81	0.68	0.57	0.47

Profit Margin - As discussed previously, 2016 was over budget financially for the Authority for various reasons, including costs savings achieved. The Authority is projecting making a profit in 2017 that is also well over what was targeted. In 2018, the profit margin is expected to decrease back to a normal range with the new vessels in service for the entire year and the loss of traffic that was unique to 2017.

Days Coverage - The days coverage shows the number of days of expenditures the Authority would be able to cover with its current assets. This is expected to grow over the planning period.

Current Ratio (Without Dedicated Funds) - The targeted current ratio is 2:1 (without dedicated savings) as a means of having a contingency fund on hand. The Authority has decided to dedicate savings to future pilot boat replacement and to funding the future severance payout entitlement. The contingency fund target was reached by the end of 2016 and is being maintained thoughout this planning period.

Return on Assets - The return on assets was very strong in 2016 and 2017. With the new vessels deployed now this falls in 2018, but remains around 5%. The goal is to earn a higher return on assets than what could otherwise be earned if the money were invested elsewhere.

Debt to Equity Ratio - The debt to equity ratio peaks in 2017 with the loans for the newest vessels. It is then expected to decline over the planning period. The new borrowing did not have a significant effect on the debt to equity ratio as the equity is also growing.

5.6 Summary of Revenue and Expense Commitments 2016-2022

A summary of the items listed in Section 6 is presented below by expense category. Capital reimbursement represents the principal payments required on the outstanding loans required for pilot vessel replacement.

		ACTUAL	BUDGET	OUTLOOK	BUDGET	PLAN			
		2016	2017	2017	2018	2019	2020	2021	2022
Income									
	Pilotage Tariffs	23,789	24,801	25,931	26,406	27,093	27,787	28,342	28,909
	Pilotage Surcharges	278	328	343	167	-	-	-	-
	Other	26	26	49	26	26	27	27	28
	Total Revenue	24,093	25,155	26,323	26,599	27,119	27,814	28,369	28,937
Direct Pilotage Costs									
Pilot Costs									
	Contract Pilot Fees	956	965	975	989	1,009	1,032	1,062	1,093
	Pilot Salaries and Benefits	10,252	10,600	10,644	11,524	11,997	12,489	12,864	13,251
	Total Pilot Costs	11,208	11,565	11,619	12,513	13,006	13,521	13,926	14,344
Pilot Boat & Pilot Travel									
	Pilot Boat Crew Costs	1,768	1,827	1,869	1,889	1,941	1,981	2,020	2,061
	Pilot Boat Operating Costs	1,541	1,980	2,111	1,968	1,949	1,948	1,971	1,994
	Pilot Boat Ownership Costs (Deprec.)	1,324	1,639	1,403	1,563	1,547	1,548	1,502	1,457
	Pilot Boat Fees (Contract)	2,750	2,872	2,997	2,911	3,029	3,071	3,104	3,135
	Pilot Travel Expenses	654	593	654	622	631	646	658	670
	Other Related Costs	42	64	62	66	68	68	69	69
	Total Pilot Boat & Pilot Travel	8,079	8,975	9,096	9,019	9,185	9,262	9,324	9,386
Other Pilot Expenses									
	Pilotage Portable Units	27	45	51	85	97	100	100	100
	Pilotage Training	315	315	315	370	350	350	350	350
	Dispatch Center	527	559	552	589	610	627	639	652
	Other Pilot Costs	559	500	512	536	525	517	517	517
	Total Other Pilot Expenses	1,428	1,419	1,430	1,580	1,582	1,594	1,606	1,619
	Total Direct Pilotage Costs	20,715	21,959	22,145	23,112	23,753	24,377	24,856	25,349
Indirect Pilotage Costs									
Admininistrative Expenses									
	Administration Salaries	1,122	1,180	1,250	1,430	1,271	1,316	1,349	1,382
	Professional Services	264	265	253	254	257	263	268	274
	Regulatory Fees	64	30	18	-	-	-	-	-
	Rent /Utilities /Supplies /Computers	405	493	473	439	361	350	347	344
	Travel	140	135	106	122	117	119	122	125
	Hospitality	9	7	10	11	12	12	12	12
	Conferences	13	10	11	9	10	10	10	10
	Other Amortization	41	39	37	77	160	173	168	163
	Total Administrative Expenses	2,058	2,159	2,158	2,342	2,188	2,243	2,276	2,310
	Loan Financing Costs	123	156	138	146	135	116	107	95
	Total Direct Pilotage Costs	2,181	2,315	2,296	2,488	2,323	2,359	2,383	2,405
	Total Expenses	22,896	24,274	24,441	25,600	26,076	26,736	27,239	27,754
	Net Profit (Loss)	1,197	881	1,882	999	1,043	1,078	1,130	1,183
	Capital Reimbursement	435	624	559	640	658	676	695	649
	Number of Contract Pilots	11	11	11	11	11	11	11	11
	Number of Employee Pilots	47	48	49	52	49	48	48	48
	Number of Assignments	7,959	8,119	8,462	8,323	8,323	8,323	8,323	8,323
	Average Assignment per Pilot	137	138	141	132	139	141	141	141
	Revenue over Assignments ratio ('000's)	3.03	3.10	3.11	3.20	3.26	3.34	3.41	3.48

6. 2018 OPERATING BUDGET

6.1 SIGNIFICANT ITEMS AFFECTING THE 2018 BUDGET

6.1.1 Planning Assumptions

The 2018 Forecast of Pilotage Requirements in Compulsory Pilotage Areas is the basis for the planning assumptions of the Authority. A summary of the forecast follows as Appendix "A".

During the planning period, it is expected that the overall number of assignments in 2018 will be fewer than in 2017. This is based on shipping announcements and information provided to the Authority. The strong financial performance in 2017 was due primarily to increased traffic that cannot be assumed to repeat in 2018. This includes:

- Robust potash export traffic in Saint John.
- Tall Ships visiting in a number of ports.
- Coal transshipment assignments in Canso.
- Cable laying project in Sydney.
- Bunker Barge traffic in Placentia Bay.

The Authority reviews each port to arrive at a projected traffic level for the port, and rolls these numbers into the overall forecast as presented.

6.1.2. Components of the Tariff Formula

The tariffs in each of the 17 compulsory pilotage areas is based on the expected number and size of ships for the area, matched against the cost of operating the area. It follows, therefore, that the cost structure varies between pilotage areas because the size and number of ships varies between pilotage areas.

The pilotage tariff charged to a ship depends upon the size of the vessel. Vessel size is measured in pilotage units which are calculated by a formula that uses vessel length, breadth and moulded depth. A significant decrease in assignments may not necessarily result in a significant decrease in pilotage units if the average vessel size increases. Similarly, a significant increase in assignments may not necessarily result in a significant increase in pilotage units if the average vessel size decreases.

The following example will illustrate a typical tariff charge in the compulsory pilotage area of Halifax. The container ship *NYG Rigel* is a regular caller at Halifax. The vessel is 55,534 gross tonnes, and has a unit measurement of 729.05 pilotage units. The cost to this vessel for a pilotage trip inward to Halifax in 2017 is $2,815.31 calculated as follows:

		2017 Tariff
Variable Charge- Greater of Unit charge or Gross Tonnage charge		
Unit Charge, 2.73 x 729.05	$ 1,990.31	1,990.31
Gross Tonnage Charge 55,534 x .0175	971.85	

Basic Charge	699.00
Fuel Charge	91.00
Travel Expense Recovery	35.00
Total Charge	2,815.31

The variable charge is intended to cover the cost to the Authority of the pilot and a portion of indirect overhead expenses, or administration. These costs vary between 60% and 65% of the cost of providing the service. The variable charge is calculated as the greater of the unit charge or the gross tonnage charge. In the above example, the unit charge is greater, so that charge prevails.

The basic charge is intended to cover the cost to the Authority of the pilot boat and a proportionate amount of direct overhead expenses, such as training, communication, and dispatching. These costs vary between 35% and 40% of the cost of providing the service.

The fuel charge is based on the budgeted fuel consumption (as included in the *Atlantic Pilotage Authority Tariff Regulations, 1996, Schedule 2, Column 6)* and the market price of fuel. The price of fuel is reviewed monthly and adjusted as required. For the purpose of this illustration, a fuel cost of $0.70 per litre has been assumed.

There are employee pilots in most compulsory pilotage areas. However, in the compulsory pilotage areas of Miramichi, Pugwash, Confederation Bridge, Charlottetown, and Voisey's Bay there are corporate or entrepreneur pilots who receive 85% of the tariff. The remaining 15% contributes to the Authority's dispatch, training, and administration costs.

6.1.3. Sensitivity of Forecast to Changes

Small variances in the number of pilotage assignments forecast do not generally affect the overall performance of the Authority. Changes in operating expenses begin to develop when the activity reaches a level, for example, where an additional pilot should be hired or laid off. This level would depend on the area being considered.

Contracts for pilot boats are generally related to the volume of assignments. Most contracts are for one year with automatic renewal clauses if no notice to terminate or amend the contract is given by either party within a specified period. For vessels owned by the Authority, there is exposure to significant fluctuations in costs, especially the price of fuel and costs related to repairs and maintenance.

Administrative expenses are generally fixed for a year, at least, and are not related to volume of activity during the year.

For illustrative purposes, the area of Placentia Bay is having a very strong year in 2016 after a down year in 2015. The budget for 2018 includes an average year in the area. The effect on the 2018 budgeted profit for the Authority if an extended facility maintenance shutdown occurs in the area, or if none occurs at all, is presented below. This assumes a consistent average vessel size.

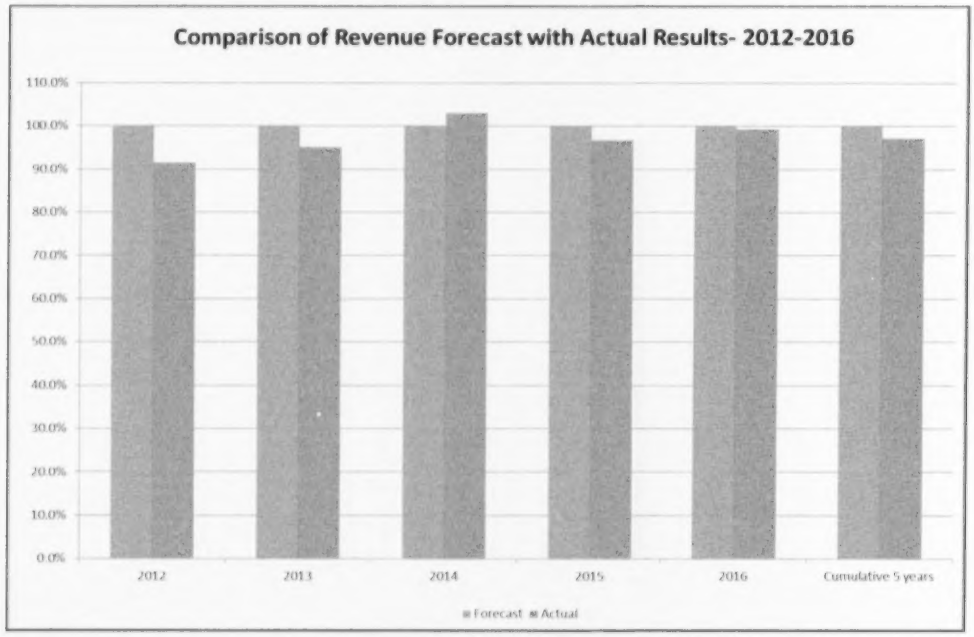
1) Forecast volume-expected net profit of $999,000.

2) Volume decline of 5% (48 assignments) from budget - expected net profit of $722,000.

3) Volume growth of 5% (48 assignments) from budget - expected net profit of $1,239,000.

The assumptions for Revenue figures in the planning period are based on future proposed tariff increases and forecasted levels of activity.

Based on the level of activity forecast, the Authority determines its expenditure and revenue expectations. Over the last five years, the cumulative revenue has been within 2.9% of the budgeted revenue. Please note the following chart:



6.1.4. Operating Expense Commitments

I. *Pilots*

Halifax - by the end of 2018 there will be fourteen pilots. Eleven of these pilots will be Class A Unlimited with one pilot a Class B. There will be one pilot at a Class C level and one pilot still at an apprentice level by year end.

Eastern NL - there will be a total of fourteen pilots for 2018. Thirteen of the pilots will have unlimited Class A licences, with the latest addition moving up through the licences to a Class B level by year-end. These pilots provide service in Placentia Bay, Holyrood, and St. John's compulsory pilotage areas.

Cape Breton - there will be a total of nine pilots for 2018. By year end all nine are

expected to have Unlimited Class A licences in the district. The Cape Breton District includes the Sydney, Strait of Canso, and Bras d'Or compulsory pilotage areas.

Saint John – expected retirements mean that there will be extra pilots carried in the port over the planning period. For 2018, there will be eight full Class A Unlimited pilots and one pilot will be at a Class A limited licence by the end of the year. There will also be one pilot at a Class B level and one at an apprentice level.

Western NL – due to a pending retirement, there will be three Class A pilots and one Class B pilot to provide service in the district, covering the ports of Bay of Exploits (Lewisporte and Botwood), Humber Arm (Corner Brook), and Stephenville. This will return to three Class A pilots in 2019 after the retirement

II. Pilot Boat Operations

The Authority currently has thirteen pilot boat contractors that provide service ranging from the provision of the complete boat and crewing in a port, to manning of Authority owned vessels, or to providing reserve boats to augment service in a port. The amount earned by the contractor in a year can vary greatly, depending on the volume of traffic and the type of boat required for a particular area. Most contractors are paid on a fee for service basis, with a guarantee of a minimum number of assignments paid.

The Authority has eleven boats that it owns and operates. With the increase in the number of vessels, the operating costs of its own fleet will increase. Repair costs have increased with the newer vessels as they have more sophisticated electronics and systems that can be costlier to maintain. With respect to the older vessels in the fleet, the primary issue is sourcing parts for spares or for rebuilds of equipment such as engines. This can mean increased downtime that can cause service issues. In the five-year period beginning in 2013, for example, the Authority spent over $3.29 million on pilot boat repairs. As the Authority replaces older vessels with newer vessels, amortization costs and financing costs also increase. There has been a significant increase in these costs as newer vessels enter service.

III. Dispatching Services

The Authority provides dispatching services throughout its region from the dispatch centre located at head office. There is a total of 5 dispatchers, under the management of the Dispatch Manager. The total cost of the dispatch operation in 2018 will be approximately $589,000, including salaries, rentals, office supplies, communications, travel, and professional services. The dispatch software has been integrated into the billing system in the APA's financial software, and all invoicing to customers is done by dispatchers. The dispatch system also provides a myriad of statistical and financial reports for management, and allows the review of information on a real-time basis.

IV. *Rentals*

The annual rental for the head office in 2018 will be $192,000, while facilities rented throughout the region for operational purposes will cost $122,000. Rental of office equipment and other items will be approximately $23,000. The Authority negotiated a head office lease in 2017 that runs until mid- 2027. In 2019, IFRS16 will be applied and the accounting of this lease will change. The estimated effects of this transition are shown in section 5.2.

V. *Professional and Special Services*

This category includes legal fees, IT support, PRMM facilitation, internal audit, Board Members Fees and Allowances, Gazette publishing fees, translation costs and other professional service fees.

VI. *Cost Increases*

The assumptions for cost increases vary according to expense item and level of activity. The inflationary factor used for operating expenditures varies depending upon contractual commitments in place, but generally ranges between two and three percent, depending upon category.

VII. *Pilot Training*

(i) *New pilot hires*

On entry to the pilotage system, pilots are granted an apprentice permit. This allows them to undertake pilotage training duties on all classes and sizes of vessels under the supervision of a licensed pilot. This is hands on training with experienced pilots acting as mentors, during which the new pilot becomes intimately familiar with the geographic area of operation, the idiosyncrasies of different berths and types of vessels, and the personnel involved in piloting, tug operations, Marine Communications and Traffic Services, etc. There are operating costs associated with this as the Apprentice Pilot receives 60% of the Class A salary for the particular district, and does not create revenue. After completion of the Apprentice period, the new entry pilot must pass an examination demonstrating knowledge of the pilotage district in order to advance to a Class C license, allowing the pilot to perform pilotage assignments on ships up to 10,000 gross tonnes. At this level, the pilot receives 75% of a Class A salary. Depending upon the area, this license will allow him to perform pilotage assignments on anywhere from 4% of traffic in an area like Placentia Bay to 85% of the available traffic in an area like St. John's. For the rest of the time, the Class C pilot will train on larger ships with senior pilots. After further experience, the pilot will progress to a Class B, and eventually to an unlimited Class A license. This training process takes a minimum of two years, with most pilots requiring about three years to reach the unlimited license.

During this initial period, the new pilot is sent on training provided by external institutions for a basic Manned Model course, a Pilot Bridge Resource Management session, AZIPOD propulsion systems training, and practical training with Escort Tugs and Z-Drive Tugs. Other courses may be utilized depending upon the qualifications the individual has upon becoming an APA pilot.
As mentioned earlier, the total cost of the initial 2-3-year training program is approximately $250,000 when salary is factored in.

(ii) *Maintaining and upgrading skills and knowledge*

The Authority sets a training budget each year after consultation with pilot representatives from each of the pilotage areas. The training requirements for individual pilots are examined, taking into account operational requirements and course availability. The need for training can be triggered by experience levels achieved by pilots in training, by new technology for which pilots have to be prepared, by new marine certification requirements, or refresher courses on technology and procedures. Based on the 2018 requirements, the budget has been increased to $370,000. The Authority has a number of new pilots and pilots working their way through the classes. Future budgets will be set based on the training requirements and may vary significantly from year to year.

6.2 Operating Budget

Operating Budget Comparisons
(000's)

	2016 BUDGET	2016 ACTUAL	2016 VARIANCE	2017 BUDGET	2017 OUTLOOK	2017 VARIANCE	2018 BUDGET	2018 CHANGE
REVENUE								
PILOTAGE CHARGES	23,981	23,790	(191)	24,801	25,931	1,130	26,406	475
INTEREST&OTHER	33	26	(7)	26	49	23	26	(23)
	$24,014	$23,816	($198)	$24,827	$25,980	$1,153	$26,432	$452
EXPENSES								
PILOT SALARIES, ETC	11,256	11,208	(48)	11,565	11,619	54	12,513	894
PILOT BOATS	5,016	4,458	(558)	5,082	5,327	245	5,095	(232)
STAFF SALARIES	1,639	1,534	(105)	1,630	1,708	78	1,922	214
PILOT BOAT CREWS' SALARIES, ETC	1,826	1,768	(58)	1,827	1,869	42	1,889	20
OPERATIONS TRANSPORTATION	603	654	51	607	654	47	622	(32)
ADMINISTRATIVE TRAVEL	153	140	(13)	135	106	(29)	122	16
HOSPITALITY	13	9	(4)	7	10	3	11	1
CONFERENCES	7	13	6	10	11	1	9	(2)
PROFESSIONAL & SPECIAL SERVICES	405	408	3	346	320	(26)	303	(17)
RENTALS	295	280	(15)	298	325	27	303	(22)
UTILITIES, MATERIALS, SUPPLIES	422	480	58	470	455	(15)	460	5
TRAINING	315	313	(2)	315	315	-	370	55
AMORTIZATION	1,316	1,375	59	1,673	1,430	(243)	1,672	242
COMMUNICATION	130	134	4	153	154	1	163	9
FINANCING COSTS	123	123	-	156	138	(18)	146	8
	$23,519	$22,897	($622)	24,274	$24,441	$167	$25,600	$1,159
NET PROFIT FROM OPERATIONS	**$495**	**$919**	$424	$553	$1,539	$986	$832	($707)
SURCHARGE REVENUE	269	278	9	328	343	15	167	(176)
PROFIT (LOSS) FOR THE YEAR	**$764**	**$1,197**	$433	**$881**	$1,882	$1,001	**$999**	($883)
TARGETED RATE OF RETURN	3.2%	5.0%		3.5%	7.2%		3.8%	
ASSIGNMENTS	8,464	7,959	(505)	8,119	8,462	343	8,323	(139)

Operating Budget Comparison
Explanation Variance between 2016 Budget and Actual

(a) Pilotage Charges - Unfavourable Variation of ($191,000)

The Authority lost activity in Saint John due to the potash mine closing, activity in Bras d'Or due to Little Narrows stopping their gypsum mining activities, and activity due to increased certificate use. There were gains in tanker traffic in Placentia Bay and a return to larger vessels in a number of area, but the net effect of these variances was a decline in revenues from budget.

(b) Expenses - Favourable Variation of ($622,000)

The Authority had savings in pilot salaries and administration salaries due to the timing of planned hiring. Pilot additions were planned for Eastern Newfoundland and Saint John which were pushed to 2017 and 2018 due to activity. A Dispatch Supervisor was budgeted to be added early in 2017, but was added in September 2017.

Pilot boat operating costs are below budget for fuel and in repairs. The cost per litre for diesel is lower than forecasted. The Authority invested in upgraded transmissions and generators for the Placentia Bay vessels which led to savings in repairs.

Operating Budget Comparison
Explanation Variance between 2017 Budget and Outlook

(a) Pilotage Charges - Favourable Variation of $1,130,000

As already discussed, the Authority has had gains in activity that may be unique to 2017. These include the tall ships that visited numerous ports, foreign navy traffic associated with Canada's 150th, cable laying projects, exports in Saint John, and significant bunker barge activity in Placentia Bay. This has put assignments and revenues 4% over budget.

(b) Expenses - Unfavourable Variation of $167,000

Pilot salaries are expected to be over budget due to recall or overtime payments with the increase in activity. Pilot boat operating costs have increased with the increase in activity with service contracts based on activity and the cost of fuel. Repair costs are also projected to be over budget with numerous vessels having their Transport Canada or Lloyd's inspections. The increase in activity is also increasing the operations travel costs. The new vessels were budgeted to be in operation at the beginning of the year, but were not launched until July. This produced savings under a few categories, including amortization and financing costs.

Operating Budget Comparison
Explanation Variance between 2018 Budget and 2017 Outlook

(a) Pilotage Charges – Favourable Variation of $452,000

The level of activity (pilotage assignments) for 2018 is expected to decrease by 1.6% with the loss of the temporary assignments received in 2017. The changes in traffic is budgeted to reduce revenues by $328,000 while the change in permanent tariff would add $780,000.

(b) Expenses – Unfavourable Variation of $1,159,000

Pilot Salaries are expected to increase with additional pilots added in preparation of retirements, two pilots returning from long-term disability, increases associated with the collective agreement in place, and as the newer pilots move through their licences and move higher in the pay scale.

Pilot Boat costs are decreasing with the reduction in expected activity. Repairs are budgeted to decrease as there are fewer inspections in 2018 after a very heavy year for this work in 2017. The investment in new pilot boats increase several categories including pilot boats, amortization, and financing costs. Staff salaries increase temporarily in 2018 in preparation for retirements as discussed earlier in the plan.

7. CAPITAL BUDGET

7.1 CAPITAL BUDGET (000'S)

	ACTUAL	OUTLOOK	BUDGET	PLAN			
	2016	2017	2018	2019	2020	2021	2022
PILOT BOATS							
PURCHASE OF BOAT	-	3,400	-	-	-	-	-
PILOT BOAT REFIT AND EQUIPMENT	490	709	878	700	750	700	700
WHARVES AND STRUCTURES	27	115	65	50	450	20	20
LEASEHOLD IMPROVEMENTS	-	530	-	-	-	-	-
COMPUTER AND OFFICE EQUIPMENT	130	202	201	80	80	80	80
COMPUTER SOFTWARE	39	53	18	30	25	25	25
TOTAL	$ 686	$ 5,009	$ 1,162	$ 860	$ 1,305	$ 825	$ 825

The Authority had been planning to purchase two previously owned pilot boats to replace aging vessels currently in use. Pilot boats are specialized equipment for which there is a very shallow market. In Canada, the only entities that would have suitable vessels for sale would be other Pilotage Authorities or their contractors, and there were none available from these sources. A worldwide search was conducted in-house and through vessel brokers. In the Corporate Plan 2017-2021 document, it was thought that a deal would close for two vessels from Wales for $3.0 million. This was in line with the amounts budgeted in previous years and only a portion for upgrades was included for 2017. This deal fell through early in 2017 and two different vessels were purchased from the Netherlands. The capital cost of these vessels was more than the $3 million due to duty and exchange differences.

Pilot boat refits and equipment are expected to increase as there are two vessels due for Lloyd's Register inspections in 2018. Navigational packages are budgeted to be upgraded and spare equipment purchased for the two newer vessels. Two engines will require rebuilding for the Newfoundland vessels and several vessels require searchlight upgrades.

The Authority has a breakwater as well as wharf facilities in a number of locations that require capital improvements on an annual basis. Computers and office equipment includes 17 PPU's to finish supplying the pilots with their Personal Pilotage Units and furniture replacement for various offices. There are no large software projects planned for 2018, but there will be upgrades to current programs.

7.2 CAPITAL EXPENDITURE COMPARISON
(000's)

	2016 BUDGET	2016 ACTUAL	2016 VARIANCE	2017 BUDGET	2017 OUTLOOK	2017 VARIANCE	2018 BUDGET	2018 CHANGE
PILOT BOATS								
CONSTRUCTION OR PURCHASE OF NEW BOAT	1,500	-	(1,500)	800	3,400	2,600	-	(3,400)
PILOT BOAT REFIT AND EQIPMENT	745	490	(255)	1,060	709	(371)	878	169
WHARVES AND STRUCTURES	385	27	(358)	165	115	(50)	65	(50)
LEASEHOLD IMPROVEMENTS	-	-	-	65	530	465	-	(530)
	-		-			-		-
COMPUTER AND OFFICE EQUIPMENT	77	130	53	125	202	77	201	(1)
SOFTWARE FOR COMPUTER PROGRAMS	24	39	15	45	53	8	18	(35)
TOTAL	**$2,731**	**$686**	($2,045)	**$2,280**	**$5,009**	$2,729	**$1,162**	**(3,847)**

Capital Expenditure Comparison Explanation

Explanation of Variance between 2016 Budget and Actual

As described above, the Authority was planning to add two vessels as it continues to replace the older Breau boats. The project was budgeted over multiple years and slipped entirely into 2017.

Again, there was a retrofit budgeted to slip into 2016 on the second Placentia Bay vessel that was actually completed in 2015. Other vessels continued to be dry docked in 2016 with various amounts of work done on each vessel with much of this work being capitalized.

Improvements are being made by the landlord in Halifax where the pilot office and pilot boat docks are currently and the need to move is not as acute. The Authority continues to seek improved facilities for Placentia Bay. Repair work and investment has not been required to date at the Herring Cove breakwater outside Halifax as the Authority awaits a recommendation from an engineering firm who did a survey in the summer. The Authority is expanding the use of tablets for its pilots and added more units than planned. Tablets were budgeted at $50,000 and $66,000 was spent. The Authority needed to upgrade vital pilot safety equipment and purchased $24,000 of man-overboard beacons that were not budgeted. A server was required for the office in 2016 with SQL licensing and IT setup costs more expensive than expected. The server was budgeted at $12,000 and cost $22,000. Other software upgrades were made at the same time for an additional $8,000.

Explanation of Variance between 2017 Budget and Outlook

The Authority purchased two additional vessels, as described above, as it continues to replace the older Breau boats. The total cost budgeted was $3 million, but the exact timing was not known. The total cost was $3.4 million due to changes in currency and expected duty costs.

Pilot boat refits and equipment were budgeted based on their being five vessels due for Transport Canada and Lloyd's Register inspections in 2017. To date, there have been no unusual findings during these inspections that have added to the basic costs. Upgrades for the newer vessels are expected to fall into 2018.

The Authority has a breakwater as well as wharf facilities in a number of locations that require capital improvements on an annual basis. The Authority investigated the purchase of a trailer to pull boats of in Placentia Bay to do some maintenance and is not pursuing the project further at this time.

The lease for Head Office expired at the end of May 2017 and a new 10-year lease was signed at another building in downtown Halifax. The leasehold improvements had been budgeted over two years, but the construction was completed during the year. The amount budgeted for building the space was budgeted net of tenant inducements. The actual recording of this transaction was $530,000 for the construction costs and a deferred liability for $381,000 for the tenant inducement received to offset the majority of this cost.The budget included $120,000 for Portable Pilot Units (PPU) being provided to the remaining pilots who have not received them to date. The Authority planned on using its old furniture, but much of it did not fit in the new office space and had to be replaced.

Explanation of Variance between 2018 Budget and 2017 Outlook

As mentioned above, the pilot boat refits and equipment are budgeted to increase as there are two vessels due for Lloyd's Register inspections in 2018. Navigational packages are budgeted to be upgraded and spare equipment purchased for the two newer vessels. Two engines will require rebuilding for the Newfoundland vessels and several vessels require searchlight upgrades.

The Authority has a breakwater as well as wharf facilities in a number of locations that require capital improvements on an annual basis. Computers and office equipment includes Personal Pilotage Units and furniture replacement for various offices. There are no large software projects planned for 2018, but there will be upgrades to current programs.

8.0 BORROWING PLAN

8.1 Borrowing Approvals

APA's funding activities are governed by section 36 of the *Pilotage Act* and section 127 of the *Financial Administration Act*.

As outlined by Order in Council, the APA is subject to a statutory borrowing approval constraint which limits total amount outstanding at any time at $10 million.

In accordance with section 36 of the *Pilotage Act* and 127(3) of the *Financial Administration Act*, the APA requires the approval of the Minister of Finance to enter into any particular transaction to borrow money, including the time and the terms and conditions of the transaction. The following outlines the corporation's borrowing plan:

8.2 Short-Term Borrowings to be Undertaken/Maintained in 2018

The Authority wishes to maintain its line of credit at $2.5 million and is currently in the form of overdraft protection.

Commercial Line of Credit
Proposed Terms and Conditions

Amount:	$2.5 million - Fluctuating by Way of Overdraft
Rate of Interest:	The Lender's Prime Commercial Lending Rate
Term:	Advances to be made as overdraft situations occur and balances will not exceed one year
Lender:	Bank of Montreal

The five-year summary of short-term borrowing usage is below:

Year	Highest Amount	Days in Overdraft
2013	$0	0
2014	$0	0
2015	$291,000	11
2016	$236,000	6
2017	$0	0

8.3 Long-Term Borrowings to be Undertaken/Maintained in 2018

Capital Loan (Existing Borrowing)

The Authority negotiated Capital Loans in the amount of $4.5 million to finance two new pilot boats for Placentia Bay in 2007. The boats cost a total of $6.7 million. The principal balance remaining on this loan as at December 31, 2017 will be $1.768 million.

The Authority launched two new pilot vessels for the ports of Halifax and Saint John. The total cost of these vessels was $5.8 million, and approval for financing up to $4.0 million was provided by the Minister of Finance pursuant to the Authority's 2011-2015 Corporate Plan. Draws on this loan facility totaled $2.0 million, and the remainder of the facility was not required for the build. The Authority was able to self-finance a larger portion of the construction costs than originally anticipated. The principal balance remaining on this loan as at December 31, 2017 will be $1.566 million.

The Authority purchased two used pilot vessels for the ports of Halifax and Saint John. The total cost of these vessels is expected to be $3.4 million, and approval for financing up to $3.0 million was provided by the Minister of Finance pursuant to the Authority's 2016-2020 Corporate Plan. Draws on this loan facility were completed in 2017 with $2.898 million remaining at December 31, 2017.

8.4 Total Borrowings – New and Outstanding

Table 1: Borrowings undertaken during the year (in millions of dollars)

	2016 Actual	2017 Projected	2018 Forecasted	2019 Forecasted	2020 Forecasted	2021 Forecasted	2022 Forecasted
Bank Overdraft /Line of Credit*	$0.236	$0	$0	$0	$0	$0	$0
Long-term Borrowings	$0	$3.000	$0	$0	$0	$0	$0
Total	$0.291	$3.000	$0	$0	$0	$0	$0

* Maximum (or peak) amount at any point during the year.

The aggregate principal amount outstanding of borrowings will not exceed the maximum limit of $10 million.

Table 1: Borrowings outstanding, as at December 31(in millions of dollars)

	2016 Actual	2017 Projected	2018 Forecasted	2019 Forecasted	2020 Forecasted	2021 Forecasted	2022 Forecasted
Bank Overdraft	At each year end, there was no short-term borrowing outstanding.						
Line of Credit							
Short-term Borrowings							
Long-term Borrowings	$3.782	$6.232	$5.592	$4.934	$4.258	$3.563	$2.914
Total	$3.782	$6.232	$5.592	$4.934	$4.258	$3.563	$2.914

9.0 COMPARISON WITH OTHER PILOTAGE AUTHORITIES

Comparisons with the three other pilotage authorities are hard to establish, as each authority has its own rate structure, pilot remuneration policies, and services. In addition, administrative expenses depend on the number of pilots on staff, the number of pilots on contract, the number of pilot boats owned and contracted, the clientele, the volume of service, the region served, equipment managed, and other lesser factors.

- The Laurentian Pilotage Authority provides primarily long-distance pilotage services. It is also responsible for local vessel movements in the various ports. The pilots are all members of a body corporate. There are three compulsory pilotage zones; the Port of Montreal, the St. Lawrence River between Montreal and Quebec, and the St. Lawrence River between Quebec and Les Escoumins, including the Saguenay River.

- The Great Lakes Pilotage Authority (GLPA) provides long-distance pilotage services and also must cope with locks and international waters (shared with the United States). In addition, the Seaway is closed for about 3 months per year. All pilots are employees (those indicated as contract pilots in the table below are apprentice pilots). The GLPA has six districts; Cornwall District, International District No. 1, Lake Ontario, International District No. 2 (including the Welland Canal), International District No. 3 (including Lakes Huron, Michigan, and Superior), and the Port of Churchill, Manitoba.

- The Atlantic Pilotage Authority provides pilotage service to many diverse ports throughout the Atlantic Provinces. Almost all the pilotage performed by the APA is harbour pilotage. The APA serves 17 compulsory ports as illustrated on the map on page 19. It also provides service on request for many other areas that do not require compulsory pilotage. The APA's employee pilots perform over 90% of the assignments each year, with the remaining assignments performed by contract pilots. The Authority owns and operates eleven pilot boats to transport pilots in several of the ports with most activity or longest pilotage distances. The APA also contracts for pilot boat service with 15 separate contractors. In some ports, separate contractors are used for summer and winter operation. The requirement for pilot boats in Atlantic Canada absorbs a greater proportion of the administrative, operating, and capital budgets for the APA than for the other pilotage authorities.

- The Pacific Pilotage Authority (PPA) provides services with employee pilots on the Fraser River that is similar to those provided by the Atlantic Pilotage Authority. However, the great majority of their pilots are contract pilots who provide coastal pilotage service over long distances. These pilots must often use helicopters to board vessels. The PPA have four key traffic areas; Vancouver, Vancouver Island, Northern, and Fraser River.

2016 Actual Results				
	Great Lakes Pilotage	Laurentian Pilotage	Atlantic Pilotage	Pacific Pilotage
Annual Revenue (000's)	$ 25,888	$ 91,430	$24,093	$ 76,284
No. of Assignments	7,020	22,432	7,959	12,661
Employee Pilots	51	0	47	8
FTE Contract Pilots	8	185	11	103